

001-P**THREE DIMENSIONAL IMAGE GUIDED HIGH DOSE RATE BRACHYTHERAPY IN UTERINE CERVIX - EXPERIENCE AT KIRAN HOSPITAL****HINA HASHMI, SHAHEEN ALI, AMIR MAQBOOL, AKHTAR AHMED
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Objectives: To share our experience with 3D Image guided brachytherapy recently introduced at our institute in the management of cervical cancer and to assess the outcome of disease.

Material and Methods: Thirty patients, aged between 39-62 years (mean age: 51 yrs) of biopsy-proven squamous cell carcinoma of uterine cervix were registered at our institute from Jan-July 2018. Patients were treated with concurrent chemoradiation upto 50.4 Gy with weekly cisplatin 50mg/m² either in definite setting or adjuvant treatment for high risk disease. CT based image guided brachytherapy with HDR Ir-192 was carried out using brachyvision software on Gamma Med plus unit. The fractionation schedule was 6 Gy x 4 insertions while post-hysterectomy patients received 6 Gy x 3 insertions after adjuvant chemoradiation. Contouring was done for the target volume and the critical organs. Dose was prescribed to HRCTV D90 and dwell position and time were manually optimized for each fraction, aiming for HRCTV D90_% ≥ 80-90 Gy while limiting the equivalent dose at 2 Gy per fraction (EQD₂ Gy) to D_{2cc} of rectum/sigmoid and bladder to ≤ 75 Gy & 80 Gy respectively. All doses were summed up to equivalent dose to 2 Gy (EQD₂) using linear quadratic model. Dose value histogram was analysed and response assessment was done two months after completion of treatment. For post hysterectomy patients, vaginal cuff brachytherapy was done and dose prescribed at 0.5 cm of vaginal mucosa treating upper 3rd of vagina.

Results: Out of thirty patients, twenty were status post hysterectomy belonging to stage IB1 to IIA, and ten were in locally advanced stage IIb and IIIA. Post hysterectomy patients are on follow-up to see the recurrence of the disease. Out of 10 patients treated with definite CCRT, 8 patients had complete response and 2 had partial response. Acute grade 1 genitourinary toxicity was seen in most patients.

Conclusion: 3D Image guided brachytherapy offers exact geometry of applicator placement, confirmation of dose distribution to target volume, decreased dose to the critical organs, true reflection of the dose given and toxicity profile thus improving local control and reducing significant morbidity.

002-P

IMPLEMENTATION OF A LOW-COST STANDARDIZED HANDOFF SYSTEM (IPASS) IN A PEDIATRIC HEMATOLOGY/ONCOLOGY UNIT: LESSONS FROM A LOW-MIDDLE INCOME COUNTRY**SHERI PARIHA, SANA SAEED, SONIA QURESHI, SADAF ALTAF
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Objectives: Communication failure is the most common preventable cause of medical adverse event, and almost half of all sentinel events involve handoff failure. Inefficient handoff is labor intensive and time consuming, impacting the quality of patient care provided. A safe and efficient means of exchange of medical information between care teams via a standardized handoff system is essential, especially in high intensity fields such as Pediatric Hematology/Oncology.

Methods: Pre-intervention, handoff entailed the physical handover of handwritten notes, carbon copied for various team members. A standardized electronic handoff tool (IPASS) was identified, and significantly modified to fit our needs, since we do not have a complete electronic medical record (EMR). Microsoft Sharepoint (Microsoft, Redmond, WA) was used to develop a tabulated online portal incorporating patient demographic, clinical and laboratory details with physician remarks. This allowed remote access, multiple simultaneous inputs, authenticated use and user-specific access control. Implementation included sensitizing residents to the IPASS template, hands-on training, weekly feedback from the residents, directly observed hand-off by the chief and/or senior resident. Following a four-week pilot this was expanded to other sub specialties, and a pre and post intervention survey was conducted to assess its impact.

Results: Pre-implementation survey revealed 74% resident and 87% faculty dissatisfaction with the current handoff process. Weekly compliance audits after initial pilot demonstrated 100% compliance. Post-Implementation results showed that the resident dissatisfaction has gone down to less than 5%.

Conclusions: Implementation of an electronic handoff tool in the absence of an EMR with minimal resources is a major breakthrough and can be replicated in other low-resource settings. We successfully implemented IPASS without any added infrastructure cost. In the next phase of our project we will be measuring trends in reduction in medical errors since implementation.

003-P

KNOWLEDGE OF THE PRIMARY CARE PROVIDERS REGARDING BASIC HOME CARE SKILLS HAVING CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA**MUHAMMAD ALI****PAKISTAN INSTITUTE OF MEDICAL SCIENCES (PIMS), ISLAMABAD.**

Acute lymphoblastic leukemia (ALL) is the most common type of childhood leukemia that is about 75-80% of all types of leukemia. In Pakistan ALL is found the most common childhood malignancy 34% and the total patient survival is 51.06%.

Study Objective: To assess the knowledge of primary care providers having children with ALL regarding basic home care skills.

Methods: A descriptive cross sectional survey was carried out at the out-patient clinic of the Pediatric Oncology Department at the Children Hospital-PIMS, Islamabad. Census method of sampling was used to estimate 100 primary care providers of children with ALL. An adapted, modified, pilot tested and interviewer-administered questionnaire (consisted of 28 questions) was used to assess the knowledge of study participants regarding home care skills. Primary care provider who, spent less than 2-3 hours per day in ALL child care, health professional and cannot speak and understand Urdu, Punjabi and Pashto were excluded from study. Study was approved by IRB of Shifa International Hospital. Written informed consent from participants was taken.

Results: The study findings indicated that most of the study participants 50% had poor knowledge level regarding home care management of ALL children, 43% were good knowledge level and only 07% has very good knowledge level. In Infection control part most of the components equal to or more than 80% participants responded negatively, while, 81% participants were not encouraging their children for tooth brushing practices in oral care part and 78% of the participants were not prohibiting black tea for their children in Nutrition care part.

Conclusion: Researcher concluded that most of the primary care providers had deficit in knowledge regarding basic home care skills of the children with ALL.

004-P

STRENGTH TRAINING AND AEROBIC EXERCISE PROGRAM REVERSES MUSCLE LOSS IN MEN UNDERGOING ANDROGEN DEPRIVATION THERAPY FOR PROSTATE CANCER: A SYSTEMATIC REVIEW

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Purpose: Androgen suppression therapy (AST) results in musculoskeletal toxicity that reduces physical function and quality of life. The aim of the present study is to review the effects of resistance training and aerobic exercises on physical performance and function, health-related quality of life (HRQoL), and reduction of treatment side effects.

Method: A systematic review was conducted using the PubMed and Google scholar data base. Original articles (2006-2018). Estimating the effects of resisted training and aerobic exercise on muscle gain in men undergoing ADT for prostate cancer was searched. Articles with systematic review and meta-analysis are excluded from the study and articles before 2006 are also not a part of study.

Results: A total of 50 studies were found related to the study objective. Muscle gain and quality of life evaluation protocols are addressed by 16 articles included in this study where results of bench press/chest press measurements predicted improvements of muscular strength in the upper body with mean difference 5.24 kg (CI [2.52, 7.97]; $p < 0.001$) and results of leg press measurements predicted improvements of muscle strength in the lower body with mean difference 28.20 kg (CI [10.51, 45.88]; $p = 0.008$) after strength and aerobic exercises; Furthermore, the improvement of the 400-m walk time was also significant (95% CI [-21.55, -14.65] s; $p < 0.001$). There was no appropriate study regarding fatigue and HRQoL.

Conclusions: Strength training and aerobic exercise seem to be a promising approach to reverse the loss of muscle mass, muscle strength, and physical performance in patients suffering from prostate cancer and can also be beneficial in preventing androgen deprivation therapy-related side effects in patients with prostate cancer. Additionally, further research should investigate training and exercise protocols which are the most pragmatic yielding best patient outcomes. Importance of screening for cardiometabolic risk factors in patients who are treated with androgen deprivation therapy should also be considered.

005-P

COMPARISON OF DOCUMENTED PATIENT CARE BEFORE AND AFTER IMPLEMENTATION OF END OF LIFE CARE PATHWAY FOR TERMINALLY ILL PATIENTS

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Purpose: SKMCH&RC primarily deals with cancer patients and has various departments like medical oncology, radiation, surgical oncology and internal medicine. They provide integrated approach in the management of such patients as needed. However, when patients who have been given all possible medical/oncological treatment still progress their disease, they are referred to palliative service for best supportive care

We audited the documented patient care of terminally ill patients before the implementation of this end of life care pathway and then re-audited after implementing it for 3 months on terminally ill patients. The aim was improvement of documented patient care at the end of life by using end of life care pathway.

Methodology: We used a retrospective method to audit care of terminally ill patients in inpatient ward of 45 patients over a period of 3 months. Then, a re-audit was done within palliative care unit over a period of 3 months and data was collected for patients who were terminally ill and were started on SKM-ELC pathway during that time. Documentation of achievement of each of these goals which are there in the pathway was sought.

Results: Initial audit was done before the implementation of end of life care pathway and it indicated that 67% of the patients were not prescribed PRN medications for symptom control during last days of life. 20% of the patients were not reviewed for need of assisted nutrition. For 20% of the patients, primary Oncologists were not even notified that the patient is dying. After implementation of this pathway, a re-audit was done and results were compared. Comparatively current modality indicated that 100 % of patients were reviewed for PRN medications and assisted nutrition. Oncologists were timely notified that the patient is dying.

Conclusion: The documented patient care after implementation of end of life care pathway was significantly improved as compared to those patients who were not on this pathway; hence implementation of this pathway is going to improve patient care from all aspects. By implementing such intervention, we can provide a harmony in care of patients at their end of life at individual, organizational and system level.

006-P

“KNOWLEDGE, ATTITUDE AND PRACTICE OF BREAST SELF-EXAMINATION (BSE) AMONG FEMALE MEDICAL STUDENTS OF ALLAMA IQBAL MEDICAL COLLEGE, LAHORE, PAKISTAN”**MARYAM ADNAN BAKHTIAR****ALLAMA IQBAL MEDICAL COLLEGE, LAHORE, PAKISTAN**

Breast Cancer is the most common malignancy among women worldwide, with Pakistan ranking first in terms of disease burden in Asia. Early detection is the mainstay of reducing breast cancer related morbidity and mortality. Among the screening methods evaluated for this purpose, Breast Self-Examination (BSE) best meets the needs of a low resource setting. Acknowledging the pivotal role medical students can play in disseminating health education to their communities, this research was aimed to assess their knowledge, attitude and practice of this important screening modality.

Materials and Methods: An observational, cross-sectional study was carried out at Allama Iqbal Medical College Lahore, between April-May 2018. Non-probability purposive sampling was employed and 285 female students (57 from each academic year) were included in the study after taking an informed consent. Data was collected through a self-administered questionnaire and was subjected to descriptive and inferential statistical analysis using SPSS version 21.

Results: Although, a significant correlation was seen between the academic year of participants and their knowledge and practice of BSE, overall knowledge and practice of BSE remained low, with only 25.96% of the participants having ‘good’ knowledge and just 20.37% claiming to perform BSE. In contrast, attitude towards BSE was strongly positive. Surprisingly, health care providers were the least common source of information regarding BSE; inadequacy of their role as health educators further reflected in the finding that even those participants who had a family history of diagnosed breast malignancy were no better informed about BSE. Additionally, 22.02% of the participants either disagreed or were neutral about practicing BSE regularly even if they had proper knowledge, indicating a lack of motivation. Another peculiar barrier to BSE practice reported by a small percentage of participants (4.40%) was ‘fear of discovering a lump’.

In conclusion, the various factors that hinder the translation of a ‘positive attitude’ into ‘regular practice’ of BSE need to be identified and addressed.

007-P**REDUCTION RATE OF KI-67 AFTER NEOADJUVANT CHEMOTHERAPY (NAC) COULD INDICATE A SURVIVAL IN PATIENTS WITH NON-PCR AND KI67 CORELATION WITH TUMOR RESPONSE TO CHEMOTHERAPY****AFSHEEN ARIF****GENERAL SURGERY LIAQUAT NATIONAL HOSPITAL KARACHI, PAKISTAN**

This is prospective study done in department of general surgery Liaquat national hospital, Karachi.

All patient with neoadjuvant chemotherapy and palliative chemotherapy followed by curative surgery were included in the study. Written and informed consent was taken before start of treatment. All patients with biopsy proven breast cancer requiring Neoadjuvant therapy were included in this study. All chemotherapy regimens were allowed for this analysis, commonest being 4 cycles of Dose dense AC or 3weekly AC followed by weekly Paclitaxel 12 cycles. In HER2 positive patients either confirmed by IHC 3+ or gene amplification by fluorescence in situ hybridization (FISH), trastuzumab was administered as neoadjuvant treatment to those who could afford it. Patients who had undergone surgery after NAC and had no pCR (defined as evidence of invasive residual tumor in the breast or axilla) were included. Clinical stage, tumor size, axillary lymph node status, estrogen receptor (ER) status, progesterone receptor (PR) status, HER2 status, and grade were recorded. The documentation of the percentage of Ki67 positivity before and after NAC was mandatory. According to immunohistochemistry (IHC), we defined five BC subgroups as follows: luminal A-like (ER-positive and PR-positive >20%, HER2negative, and Ki67-low), luminal B-like (ER-positive or negative, PR-low, HER2-negative, and Ki67-high), triple-negative (ERnegative, PR-negative, and HER2-negative), HER2-positive (ERnegative, PR-negative, and HER2-positive), and luminal B-like/ HER2-positive, also known as triple positive (ER-positive, any PR, any Ki67, and HER2-positive). All patients with positive expression of ER and/or PR received adjuvant endocrine therapy. Premenopausal women received tamoxifen for 5 years, and postmenopausal women received aromatase inhibitor for 5 years [15]. The immunohistochemistry assessment of Ki67 was consistent during the study period. Ki67 was quantified using a visual scoring system, which included an external control for validation. Stained cells were counted and expressed as a percentage. Only nuclear staining was incorporated into the Ki67 score, which was defined as the percentage of positively stained cells among the total number of malignant cells scored. If staining was homogeneous, at least 500 cells within ten randomly selected high-power fields (3400

Total 183 patients enrolled in our patients study. The mean age of the patients were 50.13 ± 39.62 years. Pre Ki67 levels were found as 67 (36.6%) has low Ki67, 37 (20.2%) has intermediate Ki67 and 79 (43.2%) has high Ki67. Responses found after the post neo-adjuvant therapy were 92 (50.3%) has decrease response, 76 (41.5%) has increase response, 12 (6.6%) has complete response and no change were found in 3 (1.6%) patients. Change in Ki 67 levels were found as 111 (60.7%) has low Ki67, 5 (2.7%) has intermediate Ki67 and 67 (36.6%) has high Ki67. Pathological stage responses were good in 89 (48.6%), poor in 37 (20.2%), complete response in 26 (14.2%) and no response in 16 (8.7%). After therapy, 92 (82.9%) low Ki 67 levels was found in decrease response. Significant differences were found between changed Ki67 levels and Ki67 Responses ($p < 0.001$). We found insignificant difference between pre Ki67 levels and pathological responses ($p = 0.059$). In pre high Ki level, we found insignificant differences between changed Ki67 responses and pathology response ($p = 0.690$)

008-P

FACTORS AFFECTING THE UTILIZATION OF CERVICAL CANCER SCREENING AMONG WOMEN: A LITERATURE REVIEW

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Background: Cervical cancer is the third most common cancer among women in the world accounting for 80% of burden in the developing countries. Deaths due to cervical cancer can be prevented through timely screening. Despite the availability of screening tools, not all women seek cervical cancer screening. Various factors have been identified by different studies which affect utilization of cancer screening but these are not synthesized collectively.

Objective: Thus the objective of this review was to appraise the factors affecting the utilization of cervical cancer screening among women.

Methods: Different articles were searched from data bases such as Google Scholar, PubMed and Science Direct. All English articles published in developed and developing countries from 1990 to 2018 were included in this study. All primary and review articles were examined for information pertinent to our objective. Findings from both quantitative and qualitative studies were reviewed and included in this review.

Results: The factors for cervical screening, reported in different studies were grouped into sociodemographic, knowledge, resource and psychosocial factors. Among sociodemographic factors, younger age, being married, having higher level of education, and high socioeconomic status were found to be positive significant factors. Similarly, knowledge of cervical cancer and screening tests were found to be important positive significant knowledge factors. With respect to resource factors, availability of facility or source in the area and health insurance coverage were found to affect the utilization of cancer screening positively. Psychosocial factors affecting the utilization of cancer screening included lack of interest, fear of procedure, and embarrassment.

Conclusion: It is concluded that younger married and educated women from higher socioeconomic status who are aware about the cervical cancer and Pap test and who have access to source of care along with coverage of insurance are more likely to utilize the screening tests and programs. Findings suggest a need to increase cervical cancer awareness in the community and to provide access to community-based screening programs. In addition, some type of insurance coverage can affect positively to utilize the screening services in a given community.

Key words: Cervical cancer, factors, screening, utilization

009-P**CASE REPORT: RELAPSED METASTATIC BREAST CANCER PRESENTING WITH SVC THROMBOSIS****TAHIRA YASMEEN, FAREEHA SHEIKH, .UMM E KALSOOM MEDICAL ONCOLOGY DEPARTMENT, SHAUKAT KAHNUM MEMORIAL CANCER HOSPITAL & RESEARCH CENTRE, LAHORE, PAKISTAN**

Breast carcinoma is the most common invasive cancer in women worldwide. Bone, lungs, regional lymph nodes and brain are the most common sites of metastasis. Here we present a case of 39-year-old female, who was diagnosed with stage IIIC, triple negative right breast infiltrating ductal carcinoma in 2015. She was treated with neoadjuvant chemotherapy followed by wide local excision, axillary lymph node dissection and radiation. Later she presented in October/2016 with complain of headache and facial puffiness. PET scan showed hypermetabolic right internal mammary soft tissue with focal tumor thrombosis of superior vena cava. She was treated with cisplatin and gemcitabine for 8 cycles till July/2017 and PET scan in July/2017 showed complete response. SVC metastasis in breast cancer is a very rare presentation and isolated presentation with SVC thrombosis is further rare.

010-P**QUALITY OF LIFE OF CAREGIVERS OF CANCER PATIENTS****UMBREEN NAVIED;
FMH&CD, LAHORE, PAKISTAN**

Background: Cancer is a major public health problem worldwide and it is encumbering economically developing countries. Quality of life is the condition of life resulting from the combination of the effects of the complete range of factors such as those determining health, happiness, education, social and intellectual attainments, freedom of action, justice and freedom of expression. A grave illness, such as cancer, not only affects lives of patients, but also the lives of their caregivers.

Aims: The study aims to enhance knowledge on the quality of life of caregivers of cancer patients as a consequence of dealing with cancer.

Methods: A cross-sectional study with a sample size of 267, by non-probability, convenient sampling was conducted. All diagnosed cancer patients giving consent were included in the study. WHO QOL BREF Questionnaire was used to collect the data from INMOL, Mayo, Jinnah and Children hospital Lahore.

Results: The study derived the highest mean score for the QOL in the environment domain (25.13). Whereas it was observed that in the psychological domain, the mean score (20.06) was even less than the physical domain, but higher than the social domain. The last domain with minimum mean score of (10.98) was the social relationship domain.

Conclusion: The study emphasizes that the social relationship domain needs to be addressed. Adequate social support, assistance of a psychologist and nursing support will prove to be vital for the caregiver.

011-P**GLIOBLASTOMA MULTIFORME WITH LONG TERM SURVIVAL.**

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ABSTRACT

Background: GBM is the most common and aggressive primary malignant brain tumor. Despite multimodality approach in the treatment of brain tumor, survival of the patients with GBM remains poor. The median survival of glioblastoma patients is ~12 months. However, 3-5% of the patients survives for more than 3 years and are referred to as long-term survivors. When disease progression occurs 6-month progression-free survival (PFS) is usually lower than 15%.

Case presentation: A 68-years-old gentleman presented with a space occupying lesion in right frontoparietal region in March 2011, work up showed space (solid enhancing 4.3 x 4.2 x 2.7 cm & cystic component 3.6 x 3.5 x 3 cm). He underwent craniotomy for excision of the lesion, Post-operative scan confirmed gross total resection. Histopathology revealed Glioblastoma Multiforme. He received concomitant chemoradiation (60 Gy/30 Fr) with Temozolomide 75mg/m² followed by monthly temozolomide (day 1-5 q 28 day cycle)., He was continued on monthly temozolomide (from July 2011-July 2015) with imaging Q 3 montly which revealed no residual disease. Patient primary oncologist was changed and since there was no residual disease and no evidence of prolong use of TMZ, it was stopped and was put on surveillance. He remained in remission till September 2017, when he developed recurrent disease. . He underwent right redo craniotomy & excision of SOL in November 2017. Histopathology revealed GBM. He has been started on monthly temozolomide q 28day cycle and have received 2 cycles to-date. This is a rare case which reported such a long survival in GBM (81 months till date).

Conclusion: GBM has poor prognosis however we describe a case with prolong outcome. Tumor biology of the patient might be the key to his differential outcome.

Keywords: Glioblastoma, Temozolomide, Radiotherapy.

012-P

AGGRESSIVE ANGIOMYXOMA OF PELVIS: A RARE CASE REPORT**SEHRISH BALOCH; ADNAN JABBAR, WASAY ABRO, TASNEEM DAWOOD.
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Background: Aggressive angiomyxoma (AA) is a rare myxoid mesenchymal tumor occurring in adult females. It was first described as slowly growing locally infiltrative tumor by Steeper and Rosai in 1983. It is characterized histologically as hypocellular tumor that stain positive for vimentin, SMA, desmin, and estrogen and progesterone receptors. AA are slowly growing tumors that rarely metastasize but most patient experience local recurrence after surgical excision. There is emerging data on role of gonadotrophin-releasing hormone (GnRh) agonist in management of AA. Herein we report case of recurrent aggressive angiomyxoma being treated with GnRH agonist and hormonal therapy.

CASE REPORT: 31 year old female presented with slowly growing mass protruding out from perineal region. Local examination showed well circumscribed soft non tender polypoidal mass measuring 27 x 22 cm. MRI pelvis was performed that showed that the tumor had high signal intensity on T2-weighted image, arising within the lower abdomen and pelvis displacing the adjacent structures and extending into ischiorectal fossa into left perineum, findings were suggestive of aggressive angiomyxoma measuring 38.7 x 25.3 x 5.4. Surgery cannot be performed due to high morbidity, hence just transgluteal core biopsy was performed which revealed myxoid lesion with prominent myxoid hypocellular stroma, findings suggestive of aggressive angiomyxoma. She was started on GnRH agonist (leucrin monthly) with hormonal treatment tamoxifen. Her scans repeated after 3 months showed responsive disease hence she was continued with same treatment. Her disease remained stable on scans performed every 3 monthly and she was continued on tamoxifen and gosrelin. She however had disease progression on scans performed after 1 and half year of treatment with increase in size of pelvic mass. At disease progression surgical evaluation was also advised but surgery could not be performed due to tumor location. Hence her hormonal therapy was switched to letrozole along with GnRH agonist. Her scans were repeated within 6 months that were suggestive of disease progression. She was started on anastrozole. Her disease evaluation done after 6 months was suggestive of stable disease; hence she is continued on anastrozole.

Conclusion: This is a rare case of angiomyxoma as most of the cases that are reported in literature have been treated with surgery, however as surgery cannot be performed in this case and it was treated with hormonal treatment.

013-P

THE UNDUE USE OF ANTI-EPILEPTIC DRUGS AS PROPHYLAXIS IN BRAIN CANCER PATIENTS

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Abstract

Objective: Use of anti-epileptic drugs in neurosurgery patients is a routine practice. We assessed whether prophylaxis with Valproate is justified or not.

Patients & Methods: Epival was given post operatively for 3 months to half of our patients under study. Adequacy of Valproic acid in serum (50-125 µg/mL) was maintained. Rest of the patients were given a placebo. A comparison was made between seizure frequencies of control and placebo groups.

Results: We found that the frequency of seizures did not improve significantly with or without AED in post operative period. Certain side effects were also noted specific to Epival in some of the enrolled patients.

Conclusion: We concluded that anti-epileptic drug which is routinely prescribed as a prophylaxis against seizures in the post-operative period should not be given unless required.

014-P**STARTING A TUMOR BOARD MEETING AT A PUBLIC SECTOR HOSPITAL. AN EARLY EXPERIENCE.****MUHAMMAD AYZED, MUHAMMAD HAIDER, AWAIS AMJAD MALIK , MUHAMMAD FAROOQ AFZAL.
DEPARTMENT OF SURGERY, LAHORE GENERAL HOSPITAL., LAHORE, PAKISTAN****Abstract:**

Objective: To discuss the problems faced while conducting MDT Meetings at a public sector hospital and its impact on patient management.

Material and methods: Department of Surgery at LGH has started conducting Tumor board meetings on monthly basis since Jan 2017. We share our experience of the 15 meetings and problems faced in conducting those meetings.

Results: A total of 15 MDT Meetings were conducted in which 53 patients suffering from different malignancies were discussed for a better treatment plan. Patients discussed included 33 pre operative and 20 post operative patients respectively. Specialty wise 18 patients were from colorectal, 21 patients were from Hepatobiliary ,03 patients were suffering from Endocrine tumors ,01 patient with malignancy of neuromuscular origin, 02 with CA Esophagus and 08 with CA Breast. The biggest issue faced by us was getting all the departments on board for conducting such meetings. We lack a dedicated oncology department at LGH and had to request involvement of personnel from either INMOL or Doctors Hospital for decision making. Unfortunately only 08 out of 15 meetings were attended by an oncologist. Similarly pathologist was present in 14 out of 15 meetings. Radiology and surgery department had a 100% attendance at the tumor board meetings. Pathological slides were not available for any patients and discussion was done on the basis of the available report of histopathology only in all of the discussed patients. Radiological images were not available on CDs and had to be discussed on films. 04 out of 53 patients didn't even have films available.

Management decisions were unaffected in 29 patients and were changed in 24 patients.

Conclusion: Although we are faced with multiple problems in conducting tumor board meetings at a public sector hospital regularly but it is mandatory for all cancer patients and we believe that with persistence we can achieve a management goal where all patients presenting with cancer will be discussed and managed through a tumor board meeting.

Key words: MDT (multidisciplinary team)

015-P

CAPECITABINE ASSOCIATED LOSS OF FINGERPRINTS: A CASE REPORT OF A 62 YEARS OLD MAN WITH COLORECTAL CANCER SUFFERING FROM CAPECITABINE INDUCED ADERMATOGLYPHIATasneem Dawood¹; Yasmin Abdul Rashid¹; Sehrish Sarwar¹; Muhammad Afzal¹¹Department of Oncology, Aga Khan Hospital, Karachi, Pakistan

Background: Capecitabine is an oral prodrug of 5-Fluorouracil (5-FU) and is converted to 5-FU in tumor tissue. Its main mechanism of action is suppression of DNA synthesis via inhibition of Thymidylate synthetase. It has anti-tumor activity against wide variety of cancers including colorectal, gastric and metastatic breast cancer among others. Adverse effects of Capecitabine include nausea, vomiting, diarrhea, hand foot syndrome, pancytopenia, stomatitis, increased bilirubin and very rarely adermatoglyphia. Dermatoglyphics refers to fingerprints. Adermatoglyphia refers to loss of fingerprints.

Case review summary: We report the case of a 62 years old male patient with locally advanced colorectal cancer. He presented in clinic with residual disease after initially being treated with local surgery and chemoradiation with 5-FU. Positron Emission Tomography scan done at the time of presentation showed locally advanced disease. He was managed with surgery followed by adjuvant chemotherapy with Oxaliplatin 130mg/m² and Capecitabine 1500mg twice a day for 2 weeks in a 3 weekly cycle. After cycle 5, the patient had grade I hand foot syndrome and inability to open a bank account due to loss of fingerprints. Patient was oblivious about this condition prior to that. In view of curative intent of treatment we continued with the planned chemotherapy cycles with the same doses and issued him a letter for submission at the bank. After completion of his adjuvant treatment that is 8 cycles of Oxaliplatin and Capecitabine, his symptoms of hand foot syndrome improved with some improvement in adermatoglyphia.

Conclusion: Fingerprints have been used since centuries as means of Identification in banks, aviation and immigration, computers and mobile phones amongst others. Awareness regarding loss of fingerprints due to Capecitabine is important for the patient and clinician and decision should be made regarding further continuation or switching to alternative treatment regimens.

Keywords: Capecitabine, Adermatoglyphia, Colorectal cancer, Chemoradiation

016-P

EXCELLENT PROGNOSIS AFTER CNS RELAPSE WITH HISTOLOGIC TRANSFORMATION TO DIFFUSE LARGE B CELL LYMPHOMA IN A PATIENT WITH LOW GRADE NON HODGKIN LYMPHOMA: A CASE REPORT.

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Case Report: We present a case of a 41 years male who was previously treated for hepatitis C in 2001. He presented in March 2003 with progressive abdominal distention and generalized fatigue. He was diagnosed as Stage IV, low grade non Hodgkin lymphoma at liver biopsy. He was treated with 4 cycles of CVP with a restaging scan showing partial response. He was then kept on follow up. In April 2005 he again presented with B symptoms. CT scan showed Progression in the abdominal lymphadenopathy. Bone Marrow biopsy was positive with <5% involvement of bone marrow with low grade NHL. He was retreated with 4 cycles of chlorambucil/ prednisolone with a Stable disease on follow up scans. In August 2007 he developed Swellings within the oral cavity with dryness of mouth. Biopsy showed salivary glands with fibrosis and focal lymphoid infiltrates. His Autoimmune profile was negative but he was suspected for Sjogren's syndrome considering the biopsy findings. Meanwhile he was operated for fistula in Ano in January 2008. In April 2008 he developed Herpes zoster and admitted for C. diff diarrhea. He was clinically stable but developed right sided varicocele along with varicose veins. On investigation CT scan showed progressive abdominal nodal disease. He showed excellent treatment response to eight cycles of CHOP (cyclophosphamide, doxorubicin, vincristine and prednisolone) with 50% dose reduction of vincristine due to peripheral neuropathy after 4 cycles. In October/2012 he was admitted with amnesia along with irritability, history of excessive sleep for some time. CT brain: Irregular enhancing mass was noted in the frontal region extending on both sides of the midline with significant surrounding edema. Biopsy of brain lesion: CNS relapse 2012--DLBCL Ki67 90%, LCA+, CD 20+. Bone marrow low grade NHL involving 10% of cellularity. Hepatitis B surface antigen was positive. He was treated with four cycles of high dose methotrexate and ARA-C5 with entecavir prophylaxis. He completed whole brain radiation in June 2013 and was kept under surveillance. He underwent road traffic accident in January 2018 and underwent plating for right leg fracture. He then presented in April 2018 with altered state of consciousness and fits. MR brain showed disease recurrence. This was isolated brain relapse as no nodal disease on pan CT scans. He improved with mannitol and steroids. He was diagnosed as having Diabetes mellitus. He received first cycle of RTOG-MTX ARM A6 and got better. He was readmitted for arm B but developed leg implant infection and expired due to septicemia. Discussion: Our patient had excellent prognosis with fifteen years of survival after diagnosis with a good performance status. He had multiple relapses and received multiple lines of therapy which is characteristic for a low grade lymphoma. His low grade lymphoma transformed into high grade DLBCL in brain but persisted in bone marrow presenting as discordant lymphoma. Average survival after transformation is twelve months but he remained in remission for 6 years and that too after a CNS relapse. In this chemoimmunotherapy era, he never received Rituximab but still outcome was good

017-P**RECURRENT VULVAR MELANOMA WITH MULTIPLE METASTASES: A RARE TUMOR WITH WORSE PROGNOSIS-A CASE REPORT AND REVIEW OF THE LITERATURE****RABAIL RAZA, HINA IQBAL RAIMA ZAKARIA
AGA KHAN UNIVERSITY HOSPITAL KARACHI****Abstract**

Rationale: Malignant melanoma, is a tumor of the skin and mucosal membranes with the ability to metastasize to various parts of the body – lymph nodes, skin, lung, liver, brain, bone, adrenal glands, and the gastrointestinal tract. Malignant melanomas of the female genital tract, including the vulva and vagina, are rare and principally affects post-menopausal women, with a mean age of 57 years. The factors that contribute to its appearance are not well known. The first case of primary malignant vaginal melanoma documented was reported in 1887 and modern literature has noted approximately 500 cases, globally till date. Vaginal melanomas constitute 0.3% of all malignant melanomas and fewer than 3% of all vaginal carcinomas. To date there is no clear consensus regarding treatment. An early, accurate diagnosis and prompt investigation is essential in reaching appropriate treatment decisions.

Patient concerns: We present a clinical case of primary vaginal melanoma in 56 year old woman who presented with complaint of growth in vulvar region. The patient underwent radical vulvectomy, and later presented with recurrence of primary malignancy and widespread distant metastasis.

Lessons: The prognosis for malignant melanoma of the female genital tract is poor, regardless of the treatment delivered, though it can be improved if the disease is diagnosed early. The survival rate is largely dependent on nodal and distant metastasis of the disease after initial tumor resection. As there is currently no proven standard therapy; so, therapy should be tailored to meet the specific needs of individual patients.

018-P**Title: PERCEIVED WELL-BEING, SOCIAL SUPPORT AND SELF- MANAGEMENT BEHAVIOR AMONG WOMEN EXPERIENCING CHEMOTHERAPY-RELATED NAUSEA AND VOMITING IN A TERTIARY HOSPITAL IN LAHORE, PAKISTAN****MUQADDAS SARWAR; SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL, LAHORE, PAKISTAN**

Introduction: Despite the advances in pharmacological management of chemotherapy induced nausea and vomiting, these symptoms still prevail. In outpatient setting, the patients are discharged to home after receiving chemotherapy, so they have to manage themselves by using different methods. They do not have readily available medical and nursing help at home like those who do have at inpatients. However, self- management behaviors of patients are greatly influenced by some factors such as perceived wellbeing and social support.

Objectives: The basic objective is to determine the level of the self-management behaviors, perceived well-being and social support of patients in outpatient setting at Pakistan and to explore if there is any significant relationship among all three variables.

Methods: A descriptive –correlational study design has been used. The data have been collected from 317 patients at single setting of 32 bedded chemotherapy unit of a tertiary care hospital of Pakistan. The purposive sampling method has been employed.

Results: The average age of patients was 42 years and they were receiving chemotherapy for different cancers mainly breast cancer and Hodgkin lymphoma. It was revealed that the self-management behaviors, for example, taking antiemetics on time and applying physical and cognitive distractions have strong association with psychological, social, physical and emotional dimensions of perceived wellbeing. Similar self-managing strategies have associations with provision of social support from healthcare team, personal and family side. Furthermore, the significant relationship was found between self-management behavior of taking antiemetics regularly in acute and delayed nausea and vomiting after receiving chemotherapy.

Conclusion: In the nutshell, certain self-management behaviors are very important alongside the use of pharmacological measure, such as, taking advised medicine regularly and applying distraction behaviors by playing with children or keeping busy in chores and listening musical chanting of the holy verses are useful self-management strategies.

019-P

EMBRYONAL RHABDOMYOSARCOMA OF ADULT NASOPHARYNX (CASE REPORT OF A RARE DISEASE)

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Introduction: Embryonal Rhabdomyosarcoma of the adult is a rare entity. Because of its aggressive nature and a high incidence of metastasis its outcome is poor. However with the combine use of chemotherapy, radiotherapy and surgery overall 5 years survival rates have improved to more than 80% in localized disease.

Case Report: We present a case of a 51 years old lady who came to us with a four months history of nasal obstruction and hearing loss. Magnetic Resonance Imaging (MRI) of the head and neck revealed a mass in the posterior pharynx predominantly on the right side with extension on the right temporal fossa, para pharyngeal space and carotid sheath with bilateral involvement of cervical lymph nodes. The mass was causing blockage of both the Eustachian tubes. Nasopharyngeal biopsy showed poorly differentiated round blue cells. A diagnosis of embryonal rhabdomyosarcoma was confirmed by positive staining for Myogenin, CD99, and Desmin.

Combination chemotherapy with VAC (Vincristine, Adriamycin and Cyclophosphamide) regimen followed by concurrent chemo radiation was completed in five months. Patient achieved complete metabolic response after four cycles of chemotherapy. Scans done three months after the end of concurrent chemotherapy also showed the complete resolution of the mass. Now patient is on maintenance therapy with etoposide which will be continued for total six months.

Conclusion: Adult nasopharyngeal Embryonal rhabdomyosarcoma although a rare and highly aggressive tumor can be cured with the combined use of chemotherapy and radiotherapy

020-P

PRIMARY PITUITARY GLAND HODGKINS LYMPHOMA PRESENTING AS EYE PTOSIS: (AN EXCEPTIONALLY RARE CLINICAL ENTITY).

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KARACHI.

Introduction: Primary Central Nervous System Lymphoma (PCNL) is un-common form of Non-Hodgkins lymphoma that can affect any part of the brain or spinal cord. PCNL involving the Pituitary

presenting in the Pituitary Gland. Headache seems to be the most common neurological presenting symptom for expanding lymphoma of the pituitary followed by visual field defects. Cranial nerves involvement is also a clinical feature.

Case Report: A 52 years-old, married, policeman by profession with no significant past medical history consulted his doctor because of right eye ptosis and head ache. A clinical suspicion of facial nerve palsy was made. However, his condition did not improve after treatment including use of steroids for about 5 months. Then he was suggested MRI with contrast which showed an abnormal signal intensity lesion in the sella turcica with extension in supra sellar region suggestive of a Pituitary Macroadenoma. Workup of the pituitary gland function was unremarkable. Patient underwent endoscopic Trans-Sphenoidal surgery of the tumor and histo-path report along with immunohistochemistry from AKU hospital Karachi revealed Classical Hodgkins Lymphoma mixed cellularity subtype. Patient noticed immediate clinical improvement after surgery. The oncological management was done in the oncology ward at JPMC Karachi.

Conclusion/Discussion: A thorough search of the literature was performed and we found only a single case report of Primary Pituitary Gland Hodgkins Lymphoma reported in 1946 thus it proves that it is an exceptionally rare clinical entity and may present unexpected and sometimes mis-leading clinical and neurological features, so the description of such unusual cases is important for expanding the awareness of this rare disease of CNS among the medical community.

021-P**ANALYSIS AND DESIGN OF NON-INVASIVE, PORTABLE DEVICE FOR EARLY BREAST CANCER SCREENING****BILAL MAJEED; THE LAHORE UNIVERSITY OF MANAGEMENT AND SCIENCES, LAHORE; PAKISTAN****Abstract:**

Breast Cancer is the top malignancy in Pakistan. According to Union for International Cancer Control (UICC), 8.2 million die of cancer per year worldwide, and Asia and specifically Pakistan has the highest incidence of this deadly disease. The main cause of its high incidence in Pakistan is that it goes undetected at the early stage (Self Breast Examination (SBE) and Clinical Breast Examination (CBE)). Both of these stages gives 20-80% false results which end up in the tumor's development up to 3rd or 4th stage (critical stages). Breast cancer has a survival rate of > 90% if detected at an early stage but unfortunately, unavailability of any non-invasive and patient-friendly solutions have elevated the problem. In this work, we are proposing a solution which will be non-invasive, portable and patient-friendly; the proposed thermogram based device can be used at home (clinic environment) and provide the user an early alarm for further clinical follow-up.

This proposed implemented system takes a thermogram of the breast using an infrared camera, applies pre-processing techniques, extracts discriminating features and based on those features, a pre-learned model is developed to decide about the presence of malignant. In this work four (4) novel features based on grey-level non-uniformity and run-length matrix are evaluated. The main novelty of this work is to develop a digital back end (DBE) processor for the feature extraction and classification for breast cancer early screening which can later be coupled with an infrared camera. The accuracy of 83.3% is achieved in addition to detecting the tumors which go undetected by mammography. As a proof of Concept, the DBE is implemented on an FPGA, and in the process of verification using the available thermograms, and will be implemented using 65nm standard CMOS process to achieve a power of less than 1mW with a small footprint.

022-P

AWARENESS OF RISK FACTORS AND SYMPTOMS OF ORAL CANCERS IN OUTPATIENTS AND ATTENDANTS OF A TERTIARY CARE HOSPITAL IN KARACHI.**SYED ARISH HAIDER¹, MOHAMMAD AREEB ASHFAQ¹, IMAN NIZAMI¹, WAJEEHA TARIQ¹, HAJIRA ZAFAR MALIK¹, SANIYA KAMAL¹, AAIDA MUMTAZ RAO¹, FAWAD HAROON¹, HUZAIFA AHMAD¹, HAROON MUHAMMAD ARSHAD¹, MAHRUKH AMIR¹, NARJIS RIZVI².****¹AGA KHAN UNIVERSITY HOSPITAL, KARACHI, PAKISTAN****²DEPARTMENT OF COMMUNITY HEALTH SCIENCES, AGA KHAN UNIVERSITY HOSPITAL, KARACHI, PAKISTAN**

Introduction: Oral cancers are the most common malignancy in men and the second most common in women in Pakistan. Its incidence in Pakistan is higher than in developed countries and presents earlier. A majority of the population uses products such as *paan*, *gutka* and tobacco, known risk factors for oral cancers. No study has been conducted in Pakistan to determine the knowledge of the population regarding the multiple risk factors, signs and symptoms of oral cancer.

Methodology: A cross-sectional study was carried out from 01/06/2017 to 12/06/2017. A standardized questionnaire consisting of sections on demographic characteristics, attitude towards oral cancer, beliefs about oral cancer, and knowledge of signs, symptoms, risk factors and screening of oral cancer, in the local language (Urdu) and English was administered to patients and attendants in outpatient clinic waiting areas of the Aga Khan University, Karachi.

Results: A total of 388 patients and attendants were included in this study. A majority (77.8%) of participants had previously heard of oral cancer and their major source of this information was the media (74.7%). The most commonly identified sign or symptom was bleeding from the mouth (43.3%) while blue patches in the mouth was the least known sign or symptom (13.4%). The most commonly known risk factors were tobacco (84.8%), sheesha (43.3%), alcohol (34.5%) and betel nut (34.5%). 71.4% were unaware of a screening test for oral cancer.

Conclusion: This study demonstrates poor knowledge of oral cancer risk factors among outpatients and attendants in Pakistan. Tobacco as a risk factor for oral cancer was the only popular choice amongst respondents. Knowledge regarding symptoms of oral cancer was also limited. The results of this study call for immediate action by all stakeholders in efforts to spread awareness and decrease disease burden on the healthcare institution.

023-P

FREQUENCY AND CORRELATES OF SYMPTOMS OF ANXIETY AND DEPRESSION AMONG YOUNG CAREGIVERS OF CANCER PATIENTS: A PILOT STUDY

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Objectives: To determine the frequency of symptoms of anxiety and depression among the young caregivers of family members with cancer and their correlation with role of gender, age and socio-economic status.

Materials and methods: It was a cross-sectional study and data was collected from Oncology department King Edward Medical University, Lahore Pakistan during January 2017 to June 2017. Eighty young and adolescent caregivers were interviewed via nonprobability purposive sampling using scales MFQ scale and spence children's anxiety scales.

Results: A total of 87.8% of caregivers were between 11-16 years of age, with 94.6% reported having support from another caregiver. At least 95% of caregivers reported symptoms of anxiety with a higher predisposition among females. Around 73% of caregivers had low monthly incomes followed by (22.9%) middle and (4.1%) high monthly incomes. Care givers belonging to low income groups were more likely to report anxiety and depressive symptoms (70%). Young adults 17 to 18 years of age reported fewer symptoms of anxiety (10.9%) than their younger counterparts. Reported symptoms of anxiety and depression decreased when the number of care givers increased – 2 (67.5%), 3 (16.2%), 4 (5.4%). Increased hospital stay was associated with increased frequency of symptoms, but not beyond 5 weeks.

Conclusions: There is a high frequency of symptoms of anxiety and depression among young care givers of cancer patients. Due to the laborious nature of care often required by patients suffering from cancer, parents and family members may the psychological needs of these adolescents.

Keywords: care-giver, anxiety, depression, cancer, youth, young caregivers

024-P

**NODULAR LYMPHOCYTIC PREDOMINANT HODGKIN LYMPHOMA (NLPHL);
TREATMENT OUTCOME STUDY IN A TERTIARY CARE CANCER HOSPITAL IN
PAKISTAN.****CHANDUMAL, FAREEHA SHEIKH, MUHAMMAD ABU BAKAR, IQRA NAEEM, NEELAM SIDDIQUI
SKMCH&RC, LAHORE, PAKISTAN**

Introduction: NLPHL represents a rare (3-5%) subtype of Hodgkin lymphoma. The hallmark histological features are the presence of nodular and diffuse proliferation of scattered lymphocyte predominant LP malignant cells, D20+CD15-iveCD30-ive. Most cases of NLPHL present at early stage and can be treated with radiotherapy alone. Advanced disease patients are given treatment with chemotherapy. For NLPHL there have been reports of excellent response to Rituximab in relapsed cases.

Objective: Aim of our study was to describe the treatment outcome of NLPHL patients treated at Shaukat Khanum Memorial Cancer Hospital and Research Center, Lahore, Pakistan.

Methods: We did a retrospective review of all patients with NLPHL treated at SKMCH & RC from 1996 to 2016.

Results: Eighty four patients were studied. Mean and standard deviation of age at diagnose was (30.71 ± 9.83); (79.8%) of the patients were male; B symptoms were present in (34.5%); stage I (23.8%), stage II (33.3%), stage III (11.9%) and stage IV (31.0%). Patients were treated with primary chemotherapy (47.6%), radiotherapy alone 14.3% and combined modality (radiotherapy and chemotherapy) (38.1%) respectively. ABVD and CHOP were administered (32.1% and 15.5%) respectively, ABVD + radiotherapy (25.0%), CHOP + radiotherapy (11.9%) and GDC and radiotherapy (1.2%) Relapse occurred in (23.8%) patients with a median follow up time in months (13 ± 2.98). Death occurred in (13.1%) patients. The estimated 10-years overall survival was 82% and the 10-year progression free survival was approximately 58%. For all relapsed cases treatment included salvage chemotherapy. Out of twenty relapse cases only four received rituximab therapy. Histological transformation occurred in seven patients; three Diffuse large B-cell lymphoma and three T-cell rich large B-cell lymphoma, one case had mixed features of both (TCR BCL and NLPHL).

Conclusion: NLPHL is a unique type of lymphoma. Our study confirms the distinct characteristics of NLPHL with a relatively good long-term prognosis. Most patients achieve an excellent response to first line therapy. There is a tendency towards multiple relapses. It may be possible to reduce treatment intensity in early stage NLPHL without affecting outcome. However, the risks of late relapses irrespective of initial therapy necessitates a long term follow up of these patients.

025-P

PULMONARY TUBERCULOSIS MIMICKING METASTATIC OVARIAN CANCER**DR. RABAIL RAZA AND DR. ANWAR AHMED**
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Rationale: Pulmonary infections can mimic or occasionally co-exist with pulmonary neoplasms. Clinically and radiographically it becomes extremely challenging to distinguish infection from pulmonary or secondary neoplasms. Each year, approximately thousands of patients are referred to our center with a presumed diagnosis of metastatic lung disease, or undergo diagnostic procedure to rule out primary or metastatic neoplasms.

Patient concerns: We present a case of 65year old female with history ovarian cancer, status-post total abdominal hysterectomy with bilateral salpingo- oophorectomy in 2015 with stable disease on follow-up scans. Three years later, patient presented with deteriorating health issues and was advised CT Scan, which showed multiple tiny nodules in both lung. Subsequently, PET CT was done, which demonstrated no metabolic activity of bilateral pulmonary nodules.

A follow- up imaging was recommended and CT scan done after 6 months showed interval increase in size and number of pulmonary nodules in bilateral lung fields. Considering patients history of known malignancy, she was diagnosed to have pulmonary metastasis.

Interventions: Core biopsy of nodule in left lower lung lesion was performed under imaging guidance.

Diagnoses: Histopathology revealed chronic granulomatous disease consistent with pulmonary tuberculosis.

Lessons: Our case highlights that tuberculosis is well known as a diagnostic chameleon and can resemble malignancy. Pulmonary TB can manifest as pulmonary infiltrates and/or mediastinal lymphadenopathy. In developing countries with high incidence of cancer and varying clinical presentations, TB often gets misdiagnosed with the result of delayed treatment start and unnecessary diagnostic procedures.

026-P

A CASE OF GIANT PROLACTINOMA**MATIULLAH KAMIN, ADNAN TARIQ****MATIULLAH KAMIN; SKMCH&RC, LAHORE, PAKISTAN**

Introduction: Pituitary tumors larger than 4 cm in size are termed “giant adenomas”. “Invasive giant prolactinoma” is defined as : 1) tumor diameter of >4cm; 2) serum prolactin >1000 ng/ml; and 3) clinical symptoms induced by hyperprolactinemia or mass effect. Giant prolactinoma is rare and usually presents in men. Complete surgical removal of giant tumor is difficult and biochemical cure is rare.

Clinical Case: A 28 year – old from Afghanistan, recently married woman was referred to us with 6 months history of secondary amenorrhea, inability to walk without aid because of tiredness, headache, blurred vision, diplopia, progressive decrease vision. She denied history of galactorrhea. Formal visual field test was no done because of language barrier. MRI leading to Endocrine clinic appointment had shown Pituitary adenoma. Laboratory evaluations showed prolactin levels as high as 23100 ng/ml (1.9-25) and further evaluations revealed cortisol deficiency, morning cortisol of 2.73 ug/dl (4.3 – 22), with normal Thyroid function tests, FSH and LH. Pituitary MRI showed a large (3.4 x 4 x 6.4 cm) solid and cystic mass in the sella/suprasellar region, causing upward displacement of the optic chiasm, invasion of the cavernous sinuses and sphenoid sinus with hemorrhagic component in the inferior frontal lobe on the left. Treatment with dopamine agonist started and also started on Prednisolone 5mg daily. Patient remarkably responded to dopamine agonist. Patient symptoms (headache, visual impairment, diplopia) improved, full visual field on confrontation. Prolactin level reduced on serial tests from 23100 to 117 ng/ml after 3 weeks treatment. Repeat Pituitary MRI after 4 months of treatment, showed interval response with resolution of large cystic component and some improvement of solid component (now measures 3.5 x 2.3 x 3.3cm) of known large pituitary adenoma.

Conclusion: In prolactin – secreting macroadenoma, goals of treatment are to decrease tumor size, improve visual field defects and restore sexual dysfunction. Dopamine agonists are able to reach these goals with reducing tumor size. Bromocriptine and Cabergoline are the two widely used Dopamine agonists. It’s very important to check prolactin levels before proceeding for surgery of any pituitary adenomas. This is demonstrated in this case where quality of life improved remarkably with dopamine agonist.

027-P**COMPARISON BETWEEN PAIN REDUCTION, BEHAVIOURAL MODIFICATIONS AND OVERALL PATIENT SATISFACTION AFTER PAIN INTERVENTION AT SHAUKAT KHANUM CANCER HOSPITAL AND RESEARCH CENTER****DANISH IMTIAZ; SKMCH&RC, LAHORE, PAKISTAN**

Introduction: Recent advances in pain management has brought a significant reduction in the suffering of both cancer and non-cancer patients. A traditional approach to pain management includes medications and non-pharmacological approaches. Interventional approaches include various procedures ranging from simple nerve blocks to intrathecal implantable pumps. At SKMCH & RC we are not doing simple intervention but neurolytic blocks for intractable pain.

Objectives: This study aims to establish, quantify and compare the outcome of these interventions done at SKMCH in terms of subjective pain reduction, behavior modifications and over all patient satisfaction. Another objective is to bring improvements in patient care by identifying factors that can improve pain services.

Method: Study is a retrospective analysis of available data from November 2016 till October 2018. Our study include both cancer and non cancer patients who under went pain intervention for pain management. Various interventions performed depending on the cause of pain and primary diagnosis for example celiac plexus block and intra thecal neurolysis. Patients were questioned as a part of our protocol through telephone to rate their pain severity in terms of numbers ranging from 0 to 10, change in behavior such as improvement in mood and sleep and overall satisfaction about their pain management.

Results:

- Demographics
- Cancer/ non- cancer patients
- Various procedures performed and their number
- Patient response in different interventions
- Reduction in pain
- Satisfaction
- Mood/sleep improvement
- Overall satisfaction vs overall pain relief

028-P

MANAGEMENT OF MASSIVE HEMOPTYSIS WITH BRONCHIAL ARTERY EMBOLIZATION (BAE) , A SINGLE CENTER EXPERIENCE ABSTRACT

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Objectives: To report our experience regarding bronchial artery embolization (BAE).

MATERIAL AND METHODS: From November 2015 to September 2016, eight patients (8 males mean age 50y) were treated for massive hemoptysis in our unit. Hemoptysis was caused by bronchiectasis (n=2), active tuberculosis (n=5) and pulmonary hypertension (n=1). These patients often present with continuous bleeding with large volume of hemoptysis, or with recurrent episodes of bleeding. Bronchoscopic assessment and interventions were performed upon admission in all patients. BAE was attempted in 8 patients, completed in 8 patients, and was unsuccessful in 1 patient. Overall, 11 embolization sessions were performed with a total of 25 arteries embolized, and the average number of arteries embolized are 3 per patient. Control of hemoptysis was observed in 7 patients (90%). Two patients had recurrent hemoptysis that occurred 1 week after the procedure, which were reembolised. The complications among our patients were predominantly catheter-related and included subintimal dissection, guidewire perforation, and reflux of embolic agents into the aorta without adverse effects

Results: Eight patients were treated with bronchial artery embolisation, which was successful in all patients without any complications. BAE is minimally invasive procedure to control severe hemoptysis. The selective bronchial artery catheterization and angiography, followed by embolization of abnormal vessels to stop bleeding, is considered to be the most effective nonsurgical treatment in the management of massive and recurrent hemoptysis.

Conclusions: BAE is a useful therapy to control both acute and chronic hemoptysis. It is important to embolize nonbronchial systemic arteries at the same setting, if they are angiographically shown to be contributing to the blood supply. It is also important to treat the underlying pulmonary process to decrease vascularity and the development of vascular collaterals. BAE may help to avoid surgery in patients who are not good surgical candidates. Should hemoptysis recur in these patients, repeat embolization can be safely performed. If surgery is indicated, BAE can stabilize the patient prior to surgery. Embolization distal to the spinal artery may significantly decrease the number of complications and may allow a more thorough embolization. Bronchoscopy and CT scanning have important contributing roles in delineating the etiology and/or the source of hemoptysis prior to the patient undergoing bronchial artery arteriography.

029-P

5-YEAR SURVIVAL RATE OF RADICAL PROSTATECTOMY VS EXTERNAL BEAM RADIATION THERAPY IN ORGAN CONFINED PROSTATE CANCER TO CHECK BIOLOGICAL DISEASE CONTROL

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PAKISTAN

Objective: The purpose of the study is to find out the 5-year survival of patients of Organ Confined Prostate Cancer who were treated with radical prostatectomy and external beam radiation therapy.

Material and Method: 60 patients with organ confined prostate cancer (T1-T2) were treated with External Beam Radiation Therapy (EBRT) and Radical Prostatectomy (RP). From 2003 till 2012, patients were entered into the study following retrospective protocols. 30 patients with organ confined prostate cancer, which were treated with External Beam Radiation Therapy (EBRT) and 30 patients with organ confined prostate cancer, which were treated with Radical Prostatectomy (RP) were included in the study. Details of treatment were reviewed by the files of the Record Room of Sindh Institute of Urology and Transplantation (SIUT), Karachi. 5-year survival rate of the patients was found out through phone calls. The survival rates were calculated by MS. Excel.

Results: Out of 60 patients treated of organ confined prostate cancer, 3 patients died and 57 patients have achieved the 5-year survival rate. The 5 year Overall Survival Rate was 95% and death rate was 5%. From which out of 30 patients with organ confined prostate cancer treated with External Beam Radiation Therapy (EBRT) 28 patients have achieved the 5 year survival rate after the treatment and 2 patients couldn't achieve the 5 year survival rate. Which shows that 5 year survival rate after EBRT was 93% and death rate after EBRT was 7%. And out of 30 patients of organ confined prostate cancer treated with Radical Prostatectomy (RP) 29 patients have achieved the 5 year survival rate after the treatment and only 1 patient couldn't achieve the 5 year survival rate. Which shows that 5 year survival rate after RP was 97% and death rate after RP was 3%.

Conclusion: The overall experience showed better results and improved survival rates for Radical Prostatectomy as compared to External Beam Radiation Therapy as a treatment option for Organ Confined Prostate Cancer.

030-P

LANGERHANS CELL HISTIOCYTOSIS ASSOCIATION WITH CENTRAL DIABETES INSIPIDUSSARA SOHAIL¹, ADNAN TARIQ¹, RABIA WALI²

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Introduction: LCH is a rare disease that is characterized by the aberrant proliferation of specific dendritic cells. Langerhans cells belong to the monocyte-macrophage system. These cells can infiltrate and destroy many tissues, especially bone, lung, and skin tissues and the hypothalamic-pituitary axis. Bone, especially skull, involvement is the most common site of LCH involvement. LCH is more often encountered in children incidence 3–5 cases per million per year, with a peak age range of 1–3 years. The hypothalamic-pituitary system is involved in 5-50% of child cases of LCH. Central diabetes insipidus (CDI) is the most common manifestation of endocrine dysfunction develops in 17-25% of children with LCH. Several pathogenesis of CDI have been postulated including an autoimmune process that involves antibodies reacting against vasopressin, LCH-infiltration and scarring in the hypothalamic pituitary area.

Clinical Case: We report a very interesting case of a 10 year girl who presented in paediatric oncology clinic with a history of left ear pain and hearing loss for 3 years, headache for 3 months and polyuria, polydipsia, nocturia for 2 months. MRI brain revealed left mastoiditis and otitis with intracranial extension of disease process. Histology of left mastoid bone confirmed Langerhans cell Histiocytosis (LCH).

On detailed endocrine evaluation there was 2 month history of polyuria and nocturia. Nocturia was 5 to 6 times at night. Serum osmolarity was 302 mOsmol/kg (273 – 304), Urine osmolality 106 mOsmol/kg (50 – 1200) without Water Deprivation and serum Sodium 143. Patient was started on chemotherapy for her LCH, after which she reported mild improvement in polyuria symptoms.

Based on classical history and biochemical profile diagnosis of Diabetes Insipidus was made. Treatment in the form of Desmopressin 0.05 mg BID was started and patient symptoms and quality of life improved dramatically. Currently patient is improving symptomatically and is under follow up.

Conclusion: LCH and CDI is a rare diagnosis, LCH is reported to be related to different endocrinopathy with CDI being common among children. This case teaches us that we need to be vigilant about different rare associations of disease and its complications. With the typical history of polyuria, polydipsia, nocturia and the supportive biochemical parameters, the diagnosis of acquired cranial diabetes insipidus was made and treatment started improved patient symptoms and quality of life as well.

031-P

RACIAL DISPARITY IN PATIENTS WITH ORAL CAVITY SQUAMOUS CELL CANCERS IN KARACHI, PAKISTAN

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JINNAH SINDH MEDICAL UNIVERSITY, KARACHI, PAKISTAN

BACKGROUND: The racial disparity in oral cavity squamous cell cancer is contributed by several factors like age, habits and socioeconomics.

METHOD: Patients with oral cavity squamous cell cancers matched on clinical characteristics, age, and site of lesion, stage, race, socioeconomic status and addiction.

RESULTS: Pakistan has four major races. Out of them Indo Aryans has got the highest incidence among the patients who presented with oral cavity squamous cell cancer at Jinnah Post Graduate & Medical Center of Karachi, Pakistan which is one of the biggest tertiary care centers of Karachi dealing with major population of patients presented from all over Pakistan. Majority of patients presented in stage 3 involving oral mucosal non healing ulcers. Smoking and betel nut with pan chewing are common addictions. Patients presented in third and fifth decades of life and are socioeconomically poor.

CONCLUSION: Differences in disease outcome may be attributed to a combination of racial factors, tumor stage, socioeconomic status, and access to health care.

Keyword: Squamous cell cancer

032-P**SYNOVIAL SARCOMA WITH CUTANEOUS METASTASIS****SHANILA AHMED; AGA KHAN UNIVERSITY & HOSPITAL, KARACHI, PAKISTAN**

OBJECTIVE: Our aim to report this rare case is to increase awareness about this uncommon presentation of advance stage synovial sarcoma.

BACKGROUND: Sarcomas are malignant tumors that are mesenchymal in origin. Around eighty percent of these tumors are soft tissue tumors while rest of the twenty percent originates from bone. Synovial sarcoma (SS) is one of the types of such tumors and most commonly presented as soft tissue mass in extremities of young adults. It is metastasized through hematogenous route and most common site of distant spread is lung. Skin metastasis of sarcomas is extremely rare and accounts for only 0.25% of all the reported cases. Owing to the rarity of the disease treatment options are less and there is limited evidence showing a survival benefit with chemotherapy treatment in SS cases. Synovial sarcoma can lead to diagnostic confusion with the following neoplasms: myoepithelial carcinoma, mesothelioma, leiomyosarcoma, epithelioid sarcoma, malignant peripheral nerve sheath tumor, and carcinosarcoma.

CASE REPORT: We report a case of an Asian male who had remote history of synovial sarcoma of right forearm. He had resection of the tumor multiple times followed by amputation of forearm. After sometime he presented with disease progression with lung metastasis. He noticed a growth of 2x2 cm at left side of his upper lip which was removed surgically and histopathological findings of that lip lesion were compatible with patient's previous history of synovial sarcoma. He also received ten fractions of radiation therapy after surgical removal of metastatic lesion of lip. Unfortunately patient presented with skin metastasis which is a late manifestation of disease and is indicative of poor prognosis. Eventually our patient died of disease complications.

CONCLUSION: The patient presented with skin metastasis as part of his presentation of late recurrence of synovial sarcoma. In conclusion, we reported an extremely rare case of disseminated cutaneous metastases derived from synovial sarcoma. The cutaneous metastases are perceived as a severe prognostic indicator. The presence of cutaneous metastases in synovial sarcoma cases indicates treatment resistance. Thus, additional treatments are needed for this disease.

KEY WORDS: Synovial sarcoma, lip metastasis, mesenchyme, soft tissue tumors, extremities

033-P**A CASE REPORT OF A 48 YEAR OLD MAN WITH METASTATIC HIDRADENOCARCINOMA OF AXILLA, WITH LITERATURE REVIEW****MUHAMMAD AFZAL ; AGA KHAN UNIVERSITY HOSPITAL. KARACHI, PAKISTAN**

Background: Hidradenocarcinoma is rare malignant tumor sweat gland of skin. It accounts for less than 0.001% of all tumors. There is little information available about the natural history and pathogenesis of this tumor. It usually presents as a single nodular lesion over the face or head region but can occur over extremities, axilla, chest or anogenital area. For local disease surgical excision is the mainstay of treatment. Features that may lead to high rate of local recurrence and distant metastasis are positive margins, extra nodal extension and lymphovascular invasion. There are case reports of use of adjuvant radiotherapy or chemotherapy in such cases. Palliative chemotherapy and targeted agents have been reported for cases with metastatic disease.

Case report: A 48 year man developed swelling in his left axilla which progressively increased in size over 2 months. He was planned for wide local excision however intra-operatively mass was found to be adherent to axillary vessels so debulking of the lesion was done. The histopathology revealed circumscribed nodular areas with nests of clear to eosinophilic cells showing atypia and nuclear pleomorphism. Adjacent areas showed extensive necrosis. These features were consistent with hidradenocarcinoma. A CT scan of chest, abdomen and pelvis performed postoperatively revealed residual disease in axilla with small bilateral pulmonary nodules most likely metastatic deposits. This case was discussed in multidisciplinary meeting and it was planned to give 5-Fluorouracil based chemotherapy. The patient however refused for further treatment. He is alive six months after his diagnosis.

Conclusion:- We present a case of a man diagnosed to have metastatic hidradenocarcinoma of the axilla. This is rare but very aggressive tumor of sweat glands. There is limited data on its management requiring further studies.

Keywords: Chemotherapy, hidradenocarcinoma, metastasis.

034-P

CANCER REGISTRIES: PAVING NEW WAYS FOR CANCER RESEARCH

SAADIA PERVAIZ; THE AGA KHAN UNIVERSITY HOSPITAL, KARACHI, PAKISTAN

Purpose/Objective: Cancer is a complex set of diseases that poses challenge to the society at multiple levels. It requires both public health experts and clinical care providers and the participation of a broad range of institutions for its effective control. Cancer Registries have a significant role in maintaining cancer data which provides insight into better diagnosis and treatment, the contributing factors towards the disease and its outcomes. AKUH has a robust hospital based registry that captures this data. The purpose of this study was to identify the burden of cancer patients presenting at AKUH between 2012 till 2014

Method: Data was retrieved using CNExT software to analyze number of cancer patients from 2012-2014.

Results: Total 11,634 cancer cases presented between 2012 till 2014. The number of cases presenting each year were 3610, 3834 and 4190 respectively. Out of those from which data have been retrieved by the registry, the numbers of cases abstracted each year were 2442, 2629 and 3178 respectively. The morphologies recorded from these cases were: Malignant 7827 (67.27%), In-situ 53 (0.45%), Benign 316 (2.71%) and Uncertain 54 (0.46%). The trend from 2012-2014 of each of these four morphological subtypes have not changed. The three most common cancers were Breast 493 (13.65%), 564 (14.72%) and 571 (13.63%), Head and Neck 393 (10.88%), 415 (10.83%) and 566 (13.51%) and Hematologic 413 (11.44%), 357 (9.32%) and 397 (9.47%) respectively. The other common cancers were Genitourinary 346 (9.58%), 256 (6.68%) and 358 (8.54%), Gynaecological 250 (6.92%) and 256 (6.68%) in 2012 and 2013. Gastrointestinal cancers 267 (6.37%) appeared among most frequent cancers for the first time in 2014.

Conclusion: Cancer registry is a useful tool in acquiring information regarding the burden of cancer presenting at AKUH.

035-P

AUDIT ON INCIDENTS AND KNOWLEDGE OF NURSES REGARDING CHEMOTHERAPY EXTRAVASATIONS AT DAY CARE ONCOLOGY OF A TERTIARY CARE HOSPITAL IN KARACHI, PAKISTAN

ARIFA AZIZ; AGA KHAN UNIVERSITY HOSPITAL, KARACHI, PAKISTAN

Abstract

Purpose: Extravasations of cytotoxic agents after intravenous administration results in serious damage to the tissues leading to local injury and tissue necrosis. Worldwide incidence of extravasation ranges from 0.1% - 6%. Patient education, early identification and management can reduce morbidity associated with chemotherapy extravasation.

Method: This audit was conducted at day care oncology of Aga Khan University Hospital to assess the knowledge of nursing staff regarding identification, management and teaching to the patients about of chemotherapy extravasations before and after teaching (intervention) sessions. These sessions were conducted monthly, for a year (July 2016 till June 2017). We also recorded incidents of extravasation reported before (February till June 2016) and after (July till November 2017) intervention.

Results: A total of twelve nurses were audited before and after the intervention. Their mean age was 36.08 years \pm 3.35 (range 32-42 years). They had median 5 years' (range 1-13 years) experience at Daycare Oncology. Overall, 63% and 96% had demonstrated and answered the steps of identification and management correctly in audit before and after intervention respectively ($P < 0.001$). Incidence of chemotherapy extravasation was 0.128% (7/5461) and 0.054% (3/5546) before and after intervention. In total, vinorelbine was the most common drug associated with such incidence (50%). Most had grade II reaction (50%) and history of chemotherapy (70%) was the most common risk factor.

Conclusion: Our hospital based incidence of chemotherapy extravasation is comparable to international data. This may be reduced further by improving knowledge of nurses regarding prevention, prompt identification, management and education of patients.

Keywords: Chemotherapy, clinical audit, extravasation, incidence.

036-P

FREQUENCY OF GYNAECOLOGICAL SYMPTOMS IN WOMEN TREATED FOR UP TO 5 YEARS WITH TAMOXIFEN**ZAINAB ZUBAIR , IRFAN- UL- ISLAM, , AAMIR ALI SYED , SHAHID KHATTAK.
SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL, LAHORE, PAKISTAN**

Background and aims: Increasing evidence regarding the decrease and preventive effect of tamoxifen in Contralateral breast carcinoma has led to its increase use over the span of time. Surveillance for uterine safety becomes important and despite of well documented adverse effect of tamoxifen on endometrium the data is scarce regarding the endometrial findings with tamoxifen which led to planning of this study to investigate the effects of 5-year's use of tamoxifen in preventive setting on endometrium and

Gynaecological symptoms.

Methods: Altogether 750 patients diagnosed with breast carcinoma, who underwent mastectomy and were put on tamoxifen therapy from jan 2012 to 31 may 2013 were included in a hospital based cohort derived from database at Shaukat Khanum Memorial Cancer Hospital & Research Centre , Lahore. During the extensive 5 year follow up (ending by 31 May 2018) the patients were inquired about gynaecological symptoms at each routine visit , surveillance of endometrial thickness at 2.5 & 5 yrs via ultrasound and evaluation of endometrium once symptomatic via sampling was done.

Results: The discontinuation rate after the start of tamoxifen was 30 % (n=225) and mean time was 18 months . The median endometrial thickness at 5 years after the use of tamoxifen was 4 mm. these findings were independent of menopausal status. Endometrial sampling was performed in 18 (2.4 %) patients and mean time of referral was 2.5 years. Only 3 patients (0.4 %) underwent hysterectomy and none was histologically proved to have endometrial carcinoma.

Conclusion: Although the discontinuation rate was high and endometrial thickness was significantly increased during the tamoxifen treatment yet the serious adverse effects were not significantly high thereby the routine gynaecological surveillance in the preventive setting could not be recommended.

037-P

RESECTED COLON CANCER IN RURAL POPULATION: ANALYSIS OF CLINICOPATHOLOGICAL FEATURES AND RECURRENCES FROM A SINGLE INSTITUTION

SHAH ZEB KHAN; BINOR CANCER HOSPITAL, BANNU, PAKISTAN

Background: Colon cancer incidence is increasing worldwide and also in low middle income countries like Pakistan. The majority of our patients present in locally advanced stage with poor treatment outcome. There is lack of specialized surgical units, lack of multidisciplinary tumor boards and no screening programmes especially in our rural hospitals.

Objectives: The aim of current study was to describe the clinicopathological features in resected colon cancer patients, limitations in management and post operative early recurrences in rural population of our local setting.

Material & Methods: A retrospective study was conducted at Atomic energy cancer hospital-BINOR, Bannu between January 2014 to December 2017. Patients from rural population with resected colon cancer receiving adjuvant treatment at our hospital were included in the study. Data was collected from patient files and analysis done in SPSS software version 20. Kaplan meir survival curves, cox proportional hazard regression model and log rank test were used. The p-value was significant when it was less than 0.05.

Results: A total of 74 patients were included in the study with 47 males and 27 females. The median age was 52 years. The majority of patients presented in stage III (69%) and 54% patients were of left sided colon cancer. The histopathological type was adenocarcinoma (100%) and 87% were moderately differentiated. The mucinous and signet ring carcinoma accounted for 23% and 13.5% patients respectively. 28 patients had recurrences at 2 years of follow up with majority (42.8%) in liver followed by lungs (28.5%). 2 patients died early during follow up and another 2 patients had not reached the specified study time of 2 years, so only 70 patients were available for recurrence analysis. Two year DFS was 61.1%. Nodal status and number of nodes removed were only significant prognostic factors for 2 year DFS and p-values being 0.011 and <0.001 respectively applying Log rank test with Kaplan Meier analysis. Patients with no nodal involvement had 81.2% less hazard of recurrence as compared to the patients with Lymph node involvement (HR: 0.188, P=0.036). Patients with less than 10 lymph nodes removed were had 9.82 times more risk of recurrence than patients with more than 10 lymph nodes removed applying univariate cox regression analysis. Rest of the factors including age, gender, laterality and tumor size were of no significant prognostic value.

Conclusion: Our study provided evidence that node positivity and less than 10 nodes retrieved during surgery has prognostic impact in resected colon cancer patients of our rural population.

Keywords: Resected, colon cancer, recurrences, disease free survival

038-P

PREVALENCE OF HUMAN PAPILLOMA VIRUS 16/18 IN A SUBSET OF GLIOMA SAMPLES AMONG PAKISTANI PATIENTS**N. SANA, S. A. ENAM, S. M. A. ADNAN, M. YUMNA, AGA KHAN UNIV. HOSP., KARACHI, PAKISTAN**

Background: Glioblastoma is highly malignant grade IV brain tumor that correspond to 15% of brain tumor. Besides highly aggressive nature etiology of glioblastoma remains unclear. 15-20% of human cancer including cervical and oral cancers strongly related to viral infection. However involvement of human papilloma virus (HPV) in tumorigenesis of glioblastoma comes to be a new concept. Prognosis of glioblastoma remains poor till date despite of advancements in surgical technique chemotherapies and radiotherapies, hence a growing interest exist in identifying etiological agent of therapeutic and prognostic importance that possibly participate in carcinogenesis and progression of glioblastoma.

Aim of the Study: To assess the presence of HPV infections and their prevalent types in glioblastoma samples of Pakistani patients.

Materials and Methods: A total of 113 patients diagnosed with glioblastoma from January 2015 to December 2016 at a tertiary care hospital in Karachi, Pakistan were recruited. The presence of HPV viral genome and their subtypes in glioblastoma samples were analyzed by using polymerase chain reaction (PCR), with genotype specific primer sets.

Results: PCR for HPV was positive for 33 patients (29.2%). Out of these, 33 patients 2 (6.0%) were HPV-16 positive while 12 (36.3%) patients were HPV-18 positive. However in the other 19 (57.7%) patients HPV genotype were not identified.

Conclusion :Our results shows relatively high prevalence of HPV as in comparison with latest published articles from two different populations, HPV prevalence found to be 21% to 23%. The presence of HPV in high grade glioma specimen needs to be further investigated in a large cohort to better understand the role of HPV in gliomagenesis and patients prognosis. Furthermore the unidentified genotypes of HPV prompt further studies in Pakistani population specifically aimed to identify the high risk HPV types for glioblastoma.

039-P

ASSESSMENT OF CAUSES OF ACUTE MORTALITY IN B CELL NHL IN TERTIARY CARE HOSPITAL IN PAKISTAN

RAHEELA MANSOOR, HALEEMA SAEED, RABIA MUHAMMAD WALI, MUHAMMAD ABU BAKAR, PALWASHA REHMAN, DEPARTMENT OF PAEDIATRIC ONCOLOGY. SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL, LAHORE

Introduction: Burkitt's lymphoma is one of most aggressive, yet curable form of cancer. Long term survival of over 90% has been reported in developed world. However, outcomes in developing countries are less favorable owing to late presentation, lack of access to healthcare facilities, late referral and malnourishment. Purpose of study is to assess acute mortality and its causes in patients presented with B cell NHL

Method: A retrospective analysis was done of Pediatrics patients with B cell NHL from January 2012 till December 2016. Records of all patients admitted with Burkitt's lymphoma were retrospectively collected for demographic profile, clinical features, and pathology, imaging studies, treatment and outcomes. Total number of expired patients with Burkitt's lymphoma were compared with equal No. of unmatched controls.

Results A total of 116 patients with the median age of 5 (2, 17) was included in this study. All were treated according to UKCCSG 2015 NHL Guidelines. A total of 58 patients died out of which 38(65%) were early mortalities (Prior to chemo cycle COPADM 2). Age; sex and residence were comparable in both groups. Median age was 5 years; males were (69%). In mortality group, 34.5% patients were below 5th centile and 31.3% were 5-10th centile. Advanced stage IV were 65 patients (55%) and treated as Group C and remaining 50 were stage III (43%) treated in Group B. Only 1 patient was stage II. High LDH values were also observed in mortality group with > 2000 in 34.5% and in 4 patients it was as high as 20,000.

In multivariable analysis, 3 variables were identified as significant independent risk factor of early death, tumor lysis syndrome (adjusted odds ratio [AOR] 15.90; 95% confidence interval [CI] 5.95-42.45), p-value (0.001), sepsis [AOR] 19.6; 95% confidence interval [CI] 7.32-52, p-value 0.000 and fungal infection; (AOR 4.41; 95% CI (1.55-12.51), 0.005).

Conclusion: Early deaths are more in Burkitt's lymphoma in our set up and main risk factor was Tumor Lysis Syndrome and sepsis due to fungal infection. Likely causative factors are due advanced stage disease high tumor burden and malnourishment at time of presentation.

040-P

UNUSUAL PRESENTATION OF NEUROFIBROMATOSIS-TYPE 1 WITH MULTIPLE MALIGNANCIES**Palwasha Rehman, Rabia Muhammad Wali.****Department of Pediatric Oncology, Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan.**

Abstract: A 4 year old child diagnosed with Acute Precursor B cell Lymphoblastic Leukemia, Standard Risk, as per NCI criteria presented to our institute in 2014 and was started on Regimen A of UK ALL 2011 Guidelines. Parents had consanguineous marriage, his first cousin on mother side died at a young age after been diagnosed with brain tumor. The child had café-au-lait macules around seven in number largest one measuring about 1-2 cm in size over the back. There was suspicion of neurofibromatosis type 1 (NF-1) but other clinical criteria were not met. After 7 months of finishing treatment for ALL, he presented with acute abdomen and underwent laparotomy; huge abdominal mass in small bowel mesentery at Doudeno-jejunal Flexure was resected. Histopathology was consistent with Histiocytic sarcoma. Treatment was started on AML based regimen, Adriamycin, Daunorubicin and Etoposide 2 cycles followed by 2 cycles of High dose Cytarabine. Post treatment 01 month, patient developed complaints of headache, MRI brain revealed high signal intensity lesion in right thalamus, on MRS the, NAA/Choline ratio is 0.62, Choline/Creatinine ratio is 1.64, NAA value is 2.02/ Creatinine is 3.04. Lipid and Lactate were low. MRS favored low grade glioma in thalamus. As the site was not accessible surgically, so it was decided to treat with chemotherapy when symptomatic. At this point the suspicion of NF-1 was confirmed, as patient had café-au lait macules, low grade Glioma and there was history relative with brain tumor. It was almost 03 month post treatment when he again presented with acute abdominal obstruction, he had ileo-ileal intussusception, underwent surgery, ileal resection was done and histopathology revealed recurrent histiocytic sarcoma. Patient's abdominal specimen for genetic analysis has been sent for review. The child is currently asymptomatic, was looking well on his last visit but unfortunately no further chemotherapy treatment could be offered.

Keyword; ALL, Histiocytic sarcoma.

041-P

PEDIATRIC CANCER CARE: QUALITATIVE REVIEW OF CAREGIVERS KNOWLEDGE, ATTITUDE AND PRACTICES AT A TERTIARY CARE CENTER IN A DEVELOPING COUNTRY

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Purpose: Knowledge, attitude and practices(KAP) about cancer is a key factor in success of cancer treatment. Approach to cancer and its treatment are determined by local beliefs and practices. This has not been studied in Pakistan so we conducted a qualitative review of KAP of caregivers of pediatric cancer patients using a locally developed semi-structured questionnaire.

Materials and Methods: This study was done in a tertiary care cancer Hospital of Pakistan (Shaukat Khanum Hospital) between February and August 2016.

A unique questionnaire was designed in accordance with the local cultural and religious beliefs and practices. Sampling was done opportunistically. Interviews were conducted in Urdu language. The interview lasted for 30-60 minute. The interview tool content was analyzed and discussed between the authors to identify relevant categories.

A 33 point questionnaire was filled to assess their cancer related knowledge and perception. Statistical analysis was done with SPSS v20 software.

Results: Sixty-one caregivers were interviewed. 31 were caregivers of newly diagnosed patients. Parents were caregivers in 69% (n=42). When asked, "What is cancer?" 65% (n=40) replied "dangerous disease", 19.7% (n=12) did not know and the remaining considered it "worsening of wounds or infection" or "lump forming disease". When asked, "What causes cancer?" the majority (44.3%, n=27) did not know, eight (13%) considered the illness "fate, destiny or God's will". Majority of caregivers (93.4% n=57) consider cancer curable. 26.2% (n=16) consider cancer contagious. 51% (n=31) expressed fear for the rest of their family. 90 % (n=55) stated that they expect the patient to have a normal future. Majority of caregivers (68.9%, n=42) were using spiritual healers either prior to or during treatment.

Conclusions: Many caregiver stressors were identified including financial and language. Many erroneous beliefs especially regarding food restriction and etiology of cancer were noted. These finding can help target specific issues in counseling and education of caregivers of cancer patients. This can serve as a pilot study for designing interventions and further study of KAP in our region.

042-P

FRAMELESS NEURONAVIGATION IN SURGICAL MANAGEMENT OF BRAIN TUMORS

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ABSTRACT: A fundamental effort in neurosurgery is to reduce surgical trauma. Microneurosurgical technique combined with precise localization of lesions can minimize the invasiveness of neurosurgical procedures. This report summarizes the Utility of frameless neuronavigator systems and examines their value in reducing operative invasiveness. The basic principle of neuronavigation is the virtual linkage between digitized neuroradiological data and real anatomical structures, allowing an excellent three-dimensional orientation by real-time graphic-anatomic interaction. As frameless graphic interactive neuronavigation is developed further, these devices should become an important component of the modern microneurosurgical armamentarium and reduce surgical morbidity.

KEYWORDS: Computer-assisted neurosurgery - Neuronavigation - Frameless stereotaxy –

043-P

“PALLIATIVE QUAD SHOT”- A NEW AVENUE FOR MYOEPITHELIAL CARCINOMAS. MYOEPITHELIAL CARCINOMAS CAN BE RADIO-SENSITIVE TOO – A CASE REPORT

**MALIHA KAUKAB , MUHAMMAD FAISAL, MOHAMMAD ADEEL, SHARAZ RABBANI, RAZA HUSSAIN, ARIF JAMSHEED.
SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE, PAKISTAN**

Background: Myoepithelial cells have ectodermal origin and are found in tissues with secretory function. The mainstay of treatment of myoepithelial carcinomas is wide local excision. The use of other interventions such as chemotherapy or radiotherapy has not been consolidated yet.

Methods: We present a case of myoepithelial carcinoma treated with low dose radiotherapy (Quad Shot) given twice and assessed by regular scans in the follow up.

Results: Myoepithelial carcinoma has shown good response resulting in disease stabilization and no progression both locally and regionally.

Conclusions: Myoepithelial carcinomas have certain variants which are responsive to radiotherapy marking its role both as curative and palliative modality.

Keywords: Myoepithelial carcinoma, Quad Shot, radiotherapy

044-P

GEN ETIC MUTATION IN EGFR EXON 20 OF GLIOBLASTOMA PATIENTS

QURATULAIN MAHA; AGA KHAN UNIVERSITY HOSPITAL ,KARACHI,PAKISTAN

045-P

SIGNIFICANCE OF SUPPORT GROUP MEETING FOR GYNAE CANCER PATIENTS**FOUZIA AMIRALI, ZARKA SAMOON****AGA KHAN UNIVERSITY HOSPITAL STADIUM ROAD KARACHI, PAKISTAN**

Background: The diagnosis of cancer comes with a distress in an individual's life, and if it becomes a gynecological cancer it vanishes woman's feeling of identity and pride. While dealing with them in an outpatient clinic we regretted for not being able to give empathetically support and time they deserve by being the sufferer of this disease. It was decided to provide a platform where they can openly share their concerns and feelings. What else could have been a better place than a support group? Support group improves quality of life, reduces anxiety and depression, increases coping skills, and helps symptoms management.

Method: We want to make them feel positive and reflect same positivity to others; therefore this group was named as MIRROR and our slogan was "Live your Life like Never Before". A speaker who is a survivor as well will leave a long lasting impact on those who are going through the illness. So, we decided to choose one of our survivors as a guest speaker. This meeting was divided into two halves first half should be an educational and the other half would be entertainment or counselling. A questionnaire has been developed to evaluate the participant's perceived effects of attending the support group on their life. 47 surveys were collected for analysis.

Result: Up till now 9 supports group meetings have been conducted. Overall result suggested that 97% patients were satisfied with the intervention they received. 35 out of 47 patients (74.4%), were the once who have attended it 2nd time. 70% of patients reported that they got benefitted with the therapies taught by our different instructors. As this is only female based meeting patients reported that they can openly and easily talk to other woman and health care professional about sensitive issues like sexuality and their body image.

Conclusion: This educational and counselling group intervention has a very positive impact on different aspects of women's lived experiences. This program also provides professionals, the insight about the patients' view and feelings regarding cancer treatment, catastrophic effect on their life and rehabilitation.

046-P

CURRENT STATUS OF RADIOTHERAPY CENTERS IN PAKISTAN: 2018 AND WHO/ IAEA RECOMMENDATION ACCORDING TO COUNTRY POPULATION**FARIA REHMAN; SINDH INSTITUTE OF UROLOGY AND TRANSPLANTATION,
KARACHI, PAKISTAN**

Aims and objectives: The purpose of the study is to see current radiotherapy centers and their services in Pakistan and suggest future strategies for radiotherapy services.

Material and methods: This study is conducted in Institute of Urology and Transplantation Karachi, department of Radiation Oncology from January to June 2018. Data of all the radiotherapy centers in Pakistan is taken.

Result: In this study we collected information from all radiotherapy centers in Pakistan. There are 26 radiotherapy centers in Pakistan. In Sindh there are 12 Linac and 7 Cobalt machines and Brachytherapy is performed in 4 centers out of 11 centers. In Punjab there are 12 Linac and 12 cobalt machines and Brachytherapy is performed in 5 centers out of 11 centers. In KPK there are 1 Linac and 4 cobalt machines out of 3 centers while in Baluchistan there is only 1 cobalt machine in one center. Brachytherapy is not performed in both provinces. We observed number of radiation therapy centers and the facilities available for patients in all over Pakistan. We need more modern technology for improvement and management of health facilities and financial support for betterment of health care. As number of patients is increasing day by day with the decrease number of health care organization, rate of mortality is increasing.

Conclusion: This study has shown different radiation therapy centers and facilities available in Pakistan. After reviewing whole study it is concluded that, there is need to increase and develop more radiation therapy centers and facilities for patients and improve radiation therapy infrastructure. Effective measures should be taken for this purpose for better outcomes of treatment.

047-P

DIAGNOSTIC UTILITY AND THERAPEUTIC IMPLICATIONS OF FLEXIBLE BRONCHOSCOPY IN FEBRILE NEUTROPENIC PATIENTS WITH LUNG INFILTRATES IN A CANCER SETTING HOSPITAL

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Background: Febrile Neutropenia (FN), a dreaded complication of cancer chemotherapy is frequently accompanied with pulmonary infiltrates which require prompt diagnosis and management to improve patient outcome. Flexible Bronchoscopy is a useful diagnostic tool in that regards.

Objective : To determine the diagnostic utility of flexible bronchoscopy in elucidating aetiology of lung infiltrates in patients with FN, and its implications on treatment and outcome for such patients.

Methods: The medical record of all patients who underwent flexible bronchoscopies in the period from July 2015 to August 2017 at Shaukat Khanum Memorial Cancer Hospital Lahore was acquired. We have shortlisted patients with FN as a consequence of cancer chemotherapy who underwent bronchial washings or Bronchoalveolar lavage (BAL) for lung infiltrates. Appropriate demographic details, clinical, radiological, microbiological and therapeutic information was collected from detailed review of patients' medical records.

Results: Out of the total 492 flexible bronchoscopies performed in the hospital during the stipulated period, 86 were performed in patients with FN with lung infiltrates. Among those patients, 65% (n=56) were male. The mean age of the patients was 25 ± 18 years. 67% patients (n=58) had Leukaemias, 19% (n=16) had Lymphomas and remaining 14% (n=12) had solid organ malignancies. The mean absolute neutrophil count was $0.20 \pm 0.36 \times 10^3/\mu\text{l}$. Prior to the procedure, other cultures including blood and sputum cultures were positive in 27% (n=23) patients. All patients were receiving empirical antimicrobials, of which 36% (n=31) were receiving antibacterial alone and 64% (n=55) both antibacterial and antifungal therapy. BAL cultures were diagnostic in 44 % (n=38) patients. Aetiology was bacterial, fungal and mixed in 25/38, 12/38, and 01/38 patients respectively.

The culture results of BAL led to the change of antimicrobial regime in (49/86) 57% of patients which included either a change or de-escalation of empirical therapy; of which 38/49 (78%) were safely discharged from the hospital within 30 days. 01/86 (1.1%) patient had post procedure complication.

CONCLUSION: Flexible bronchoscopy offers a relatively safe and reasonably accurate diagnostic tool for FN patients with lung infiltrates

048-P

HEALTH RELATED QUALITY OF LIFE (HRQoL) ASSESSMENT FOLLOWING RADICAL CYSTECTOMY IN SOUTH ASIAN POPULATION.

SUHAIB-BIN-BILAL HAFI ; SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL & RESEARCH CENTER, LAHORE, PAKISTAN

Abstract

Purpose: Radical cystectomy is carried out for muscle invasive bladder cancer, which greatly affects the quality of life. Objective of our study was to assess health-related quality of life (HRQoL) in patients following radical cystectomy.

Methods: A retrospective review was done in patients that underwent radical cystectomy between July 2009 and November 2014 at Shaukat Khanum Memorial Cancer Hospital and Research Center, Lahore, Pakistan. HRQoL assessments of 34 patients done during clinical psychology review were included in this study. HRQoL was assessed using FACT-BL questionnaire.

Results: Low scores were observed in physical well-being and emotional well-being domains with mean scores of 7.32 and 7.97 respectively. Patients scored high on social and family well-being, functional well-being and additional concerns, with mean scores of 24.9, 17.24 and 21.73 respectively.

Conclusions: Psychological evaluation and rehabilitation should be an integral part of surveillance after radical cystectomy.

049-P

BRONCHIAL NEUROENDOCRINE TUMOR CAUSING ACROMEGALY---A RARE OCCURRENCE**SARA SOHAIL, UMAL AZMAT, WAQAS SHAFIQ, INTERNAL MEDICINE DEPARTMENT, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL & RESEARCH CENTER, LAHORE, PAKISTAN**

Acromegaly is caused by the overproduction of growth hormone. The most common cause being the benign adenoma of pituitary gland. However in very rare cases (less than 1% of all cases) ectopic secretion of growth hormone releasing hormone (GHRH) can lead to acromegaly. In such patients, GHRH secreted by neoplastic tissue stimulates pituitary somatotroph cells to form and release inappropriately increased amount of growth hormone (GH).

Clinical Case: 32 years female presented to Pulmonology clinic with cough, undocumented weight loss for 4 years and hemoptysis for 1 week. Initial workup done showed a large right hilar/ lower lobe mass. Bronchial biopsy of the right sided mass revealed neuroendocrine tumor (NET) grade I.

During workup for her NET, a pituitary macroadenoma was incidentally noted on CT scan. On endocrine evaluation, pertinent history included amenorrhoea for last 1 year. On examination patient has subtle acromegalic features with prominent nose and dry skin. Hormonal profile revealed markedly elevated IGF-1 1018 ng/ml (115-307) and mildly elevated Prolactin 136 ng/ml (1.9-25). Morning Cortisol, FSH and LH were low, thyroid profile was normal. Oral Glucose Tolerance Test (OGTT) was not done at that time. MRI Brain revealed pituitary macro adenoma measuring 2 x 1.2 x 1.5 cm. Visual perimetry was normal. Given above a diagnosis of GH releasing pituitary macro adenoma was made and patient was to be considered for transphenoidal surgery.

Patient underwent right sided pneumonectomy histology showed Neuroendocrine neoplasm, WHO grade-II, 8.0 cm tumor composed of in nests of round cells with nuclei having salt and pepper chromatin. Synaptophysin and Chromogranin stains positive in tumor cells. Postoperatively patients IGF-1 levels and prolactin levels normalized. OGTT also showed normal suppression of GH.

On Four months follow up, patient reported normalization of menstrual cycle after 1.5 years. MRI Brain showed significant reduction in the size of pituitary macroadenoma measuring 1.6 x 1.3 x 0.8 cm.

Conclusion: Given response of pituitary adenoma post resection of NET, diagnosis of GHRH secreting NET was made. On next follow up repeat IGF-1 level and repeat MRI Brain is planned.

050-P

AN OVERVIEW OF LARYNGEAL CANCER TREATMENT AT A TERTIARY CARE ONCOLOGICAL CENTER IN A DEVELOPING COUNTRY

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Introduction: Development of laryngeal cancer is multifactorial, and management is surrounded with controversies. Recent reports suggest a decline in the survival of these patients. We conducted a study to analyze the clinicopathological parameters and compute the outcomes in terms of survival in patients with laryngeal cancer treated at our institution.

Methods: Electronic charts of 515 patients with Laryngeal cancer treated at our Hospital and Research Center from 2004 to 2014 were retrospectively reviewed.

Results: Median age was 62 years. Male: female ratio 91%: 9%. Sixty-two percent were smokers. Histologically, all were squamous cell carcinoma. Most common subsite was glottis (88%). Treatment was non-surgical in 92% and surgical in 8%. The five-year overall survival (OS), disease-specific survival (DSS), disease-free survival (DFS) and locoregional control (LRC) were 67%, 74%, 59% and 70%, respectively. OS, DSS, DFS and LRC for early stage (I-II) and advance stage (III-IV) were 81 and 54%, 86 and 63%, 75 and 45%, and 83 and 57%, respectively. Twenty-two percent recurred locally. Of these failures, 19% were inoperable, 36% were surgically salvaged and 34% refused laryngectomy.

Conclusions: Our survival rates are comparable with published data. The high refusal rate for salvage total laryngectomy is concerning and needs further study to evaluate the reasons.

051-P**CARDIAC UPTAKE PATTERNS ON HYBRID MOLECULAR IMAGING: A PICTORIAL REVIEW****MAIRAH RAZI, AAMNA HASSAN.****DEPARTMENT OF NUCLEAR MEDICINE, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE.**

BACKGROUND: Hybrid imaging is emerging as a useful modality in various clinical disciplines. Positron emission tomography (PET) computed tomography (CT) with F18-Fluorodeoxyglucose (FDG) has gained much interest in assessing metabolic activity and myocardial viability of coronary artery disease. Incidental cardiac abnormalities on oncologic PET-CT are frequently seen with variable myocardial uptake from no discernible activity to quite intense or diffuse uptake. In this pictorial review, highlights of normal variants, malignant and non-malignant cardiac abnormalities on oncologic PET-CT are being presented.

OBJECTIVE: The purpose of this pictorial review is to draw attention to normal and abnormal variants of myocardial metabolic activity found incidentally on PET-CT.

Case 1: Variable physiological patterns of cardiac FDG activity showing diffuse left ventricular uptake, *focal myocardial uptake (papillary muscle) and cardiac blood pool activity.*

Case 2: FDG non-avid calcified left ventricle myocardial infarction with an intraventricular thrombus.

Case 3: A non-avid left intraventricular thrombus.

Case 4: Intense abnormal FDG pooling in cardiac apex with bulging of myocardium, most likely representing aneurysm.

Case 5: A hypermetabolic primary squamous cell carcinoma of left lung adherent to pericardium with contiguous nodular pericardial dissemination.

Case 6: A hypermetabolic left upper lobe carcinoma invading the pericardium; inseparable from left main pulmonary artery.

Case 7: Hypermetabolic low attenuation densities in right atrium is suggestive of tumor thrombosis in a newly diagnosed non-Hodgkins lymphoma.

CONCLUSION: Recognition of varied physiologic patterns of cardiac uptake on PET-CT reduces false positive rates. Similarly, recognition of incidental cardiac abnormalities may trigger further investigation and management.

Key words: F18-Fluorodeoxyglucose; PET-CT; Hybrid imaging; Myocardial uptake.

052-P

VIRAL INHIBITORS INVOLVED IN GENESILENCING OF LIVER CANCER CELLS**TOOBA HAMEED; UNIVERSITY OF THE PUNJAB, LAHORE, PAKISTAN**

Background: In today's world, role of cancer in social health cannot be ignored especially hepatocellular carcinoma. Hepatocellular carcinoma (HCC) is a primary cancer of the liver that is predominant in developing countries, with nearly 600,000 deaths each year worldwide. Acc. To GLOBOCAN: There were 14.1 million new cancer cases, 8.2 million cancer deaths and 32.6 million people living with cancer in 2012.

Aims and Objectives: Gene silencing have revolutionized the treatment of oncogenes, now we can cure liver cancer by using RNAi (RNA interference), or by using oncolytic virotherapy in which virus kills the cancer cell itself.

Findings: RNAi technology can be directed against cancer using a variety of strategies like gene silencing. Combined viral and host gene silencing is a potential therapeutic strategy. Antiviral agents are used to inhibit production of viruses that cause disease. Most antiviral agents are only effective while the virus is replicating. Some enzymes and genes present in viruses are potential targets for antiviral drugs.

Conclusion: In this review we'll summarize and compare different currently used Viral /host gene silencing methods and antiviral treatments including Oncolytic virotherapy.

Future prospects: RNAi has tremendous promise for developing innovative therapy against viral infection. G47 Δ a novel therapeutic agent for HCC whereas, oncolytic virotherapy holds promise for the treatment of liver tumors by genetically modifying virus genome we can achieve our goals.

053-P

99mTc MDP SPECT-CT–BASED MODIFIED MIRELS CLASSIFICATION FOR EVALUATION OF RISK OF FRACTURE IN SKELETAL METASTASIS: A PILOT STUDY.*

SAIMA

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BACKGROUND: Osseous metastases predispose the bones to impending risk of fracture. Conventional Mirel's scoring system quantifies the risk of sustaining a pathologic fracture in weight bearing long based on radiographs. Our study proposes SPECT-CT based modified Mirel's scoring system and its comparison with conventional Mirel's scoring.

METHODS: A prospective review of Tc99m MDP SPECT-CT scans performed in patients referred to Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan, between July 2016 and April 2017. A total of 32 metastatic lesions in weight bearing long bones were evaluated in 16 patients; aged 35 to 75 years, 11 males and 5 females. As per Mirel's criteria each lesion was assessed for the site (upper limb, lower limb, Peritrochanteric), type (blastic/mixed/lytic), MDP avidity (avid, mixed, non-avid), size on X-ray (<1/3rd, 1/3-2/3, >2/3rd) and pain (mild, moderate, functional). For modified Mirel's scoring system same variables were observed using the Tc99m MDP SPECT-CT scans. Additional parameters recorded include: cortical lysis, circumferential involvement and extra-osseous soft tissue. Clinical recommendations were derived for both the scores as: <7 (radiotherapy and observation), 8 (clinical judgment), >9 (prophylactic fixation). Statistical difference between the two scoring systems was evaluated by applying Chi-square test ($p < 0.05$).

RESULTS: Out of 32 lesions, 21 (66%) were peritrochanteric and 11 (34%) involved shaft of the femurs. X-ray based Mirel's scores were; <7 [n=5,21.8%], 8[n=15,46.9%] and >9 [n=12,37.5%]. SPECT-CT based Mirel's score were; <7 [n=8,25%], 8[n=15,46.9%] and >9 [n=9,28%]. On bivariate analysis, there was statistically significant difference in the results of two scoring systems with an overall change in scores in 6 lesions ($p < 0.01$).

Cortical lysis was noted in 8(24%) lesions on SPECT-CT versus only 2 (6.3%) on X-rays. SPECT-CT showed that 65% of lesions involved more than 50% of the circumferential diameter on axial images. One patient had extra-osseous soft tissue extension.

CONCLUSIONS: Our pilot study shows that a modified Mirel's scoring system based on bone SPECT-CT can yield useful information about predicting risk of fracture in skeletal metastases.

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054-P

EXTRA NODAL LYMPHOMA GOING BIZARRE ON IMAGING- A PICTORIAL REVIEW

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Abstract

Background: Lymphomas are common heterogeneous group of cancers arising from lymphocytes. Many of them give atypical initial imaging findings with various visceral. Cross sectional imaging modalities are used to estimate the extent of disease, staging and multiple visceral involvements.

Case studies: We will be presenting five patients with biopsy proven lymphoma with extra-nodal involvement, presenting with different imaging features. We will be discussing the role of imaging in diagnosing and staging lymphoma and to differentiate from non-neoplastic/other neoplastic diseases. All patients underwent chemotherapy with positive response to the treatment.

Conclusion: Lymphoma has variable presentations on imaging at extra-nodal sites, keeping it in the list of differential diagnosis for the radiologist. Some cases can go quite bizarre on cross sectional imaging that can be challenging to evaluate on imaging

055-P

CORRELATION OF HUMAN PAPILLOMAVIRUS & CLINICAL PARAMETERS WITH 5-YEAR SURVIVAL OF PAKISTANI ORAL SQUAMOUS CELL CARCINOMA PATIENTS**Q. UROOJ, S. M. A. ADNAN, A. SOHAIL;
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Background: The prevalence of oral squamous cell carcinomas (OSCC) in Pakistan is on the rise. This may be attributed to the increase in human papilloma virus infection (HPV) which has been strongly associated with a certain sub-type of OSCC. The aim of this study is to compare 5-year survival rate of HPV-positive OSCC patients with those having HPV-negative OSCC at a tertiary care hospital in Karachi, Pakistan.

Methodology: A total of 140 patients diagnosed with OSCC from January 1991 to December 2004 were enlisted. HPV status and subtypes were analyzed through polymerase chain reaction (PCR) in a previously published article.

Results: PCR for HPV was positive for 95 patients (67.9%). Out of these, 85 patients were HPV-16 positive while 2 patients were HPV-18 positive. The mean survival time for HPV positive patients was 44.3 months whereas survival time for HPV negative patients was 46.9 months. Univariate analysis showed HPV status in OSCC was not a statistically significant factor in determining five-year survival rate ($p=0.386$)

Discussion: These results show that there is no increase in survival rates in HPV positive patients as compared to patients with HPV negative serology illustrating the fact that HPV positivity cannot be considered a good prognostic marker in patients with oral squamous cell carcinomas. These results however do not concur with previous studies. The novelty of our results may be attributed to a high incidence of betel nut and tobacco use in the South Asian population or the site of involvement (the tongue is the most common site worldwide, while the buccal mucosa is the most common subtype in Pakistan).

Conclusion: There is a high prevalence of HPV-positive OSCC in Pakistan; however, there is no difference in the 5 year survival rate when compared to HPV-negative OSCC.

056-P

GLIOBLASTOMA: A DIAGNOSTIC CHALLENGE ON CONVENTIONAL MRI AND DIFFUSION WEIGHTED IMAGES

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Introduction: Glioblastoma (GB) is the most common and aggressive primary brain tumor of the adults. Glioblastomas (grade IV according to WHO classification) are divided into primary and secondary type. Primary GB are intra axial lesions which arise de novo, without any precursor lesion. Secondary GB progress from existing low grade or anaplastic astrocytoma. The overall prognosis of these tumor is poor, because of the infiltrative nature of the disease and its resistance to chemoradiotherapy.

Case Presentation: We will be presenting a case of 67 year-old-male with recent onset episodes of seizures since 4 months. No focal neurological deficits. Baseline MR showed cortical T2/FLAIR hyperintense signal in the left parietal region without enhancement. No diffusion restriction seen on DWI/ADC images. On followup imaging after 3 months, there was development of ring enhancing lesions, with peripheral diffusion restriction and central facilitated diffusion.

Discussion: Magnetic resonance imaging (MRI) is the diagnostic modality of choice for initial characterization of glioblastoma. T2/FLAIR hyperintense lesion with peripheral low signal having post contrast enhancement are termed as ring enhancing lesion. Ring enhancing lesion has a wide imaging differential, ranging from glioblastoma to brain abscess, demyelination to radiation-induced necrosis. Diffusion weighted sequences (DWI/ADC) imaging sequences have further improved the characterization. Early GB can represent as T2/FLAIR hyperintense cortical signal involving the gray matter, with subsequent involvement of sub cortical white matter. These changes have variable contrast enhancement, progressing to classic glioblastoma, with lesions having central necrosis and peripheral thick nodular ring of enhancement. Abscess can have similar central necrotic component, with peripheral T2 hypointense rim, which shows smooth enhancement.

Conclusion: Imaging features of glioblastoma can mimic other diseases such as abscess in our case. Careful imaging analysis necrosis, disease progression and contrast enhancement on conventional MRI and diffusion weighted images can help us to come up with appropriate diagnosis.

057-P

SIGNIFICANCE OF SAGITTAL BRAIN MRI SEQUENCE IN ROUTINE REPORTING

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Background: MRI is an imaging modality that displays images with an excellent soft tissue contrast with multi-planar reformats. MRI does not use ionizing radiation. It is the diagnostic test of choice in neuropathologies.

Discussion: Various sequences are acquired during a routine MRI examination in axial, sagittal and coronal planes. Midline sagittal image acquired through the brain gives a panoramic vision to various anatomical variants and brain pathologies. It helps in better visualization and identification of pathological alteration in cerebral venous sinuses, sella turcica & pituitary gland, corpus callosum, fornix, pineal region, posterior fossa structures including brain stem and cerebellar tonsils. Pathologies involving occipitocervical junction, atlantoaxial joints, nasopharynx and spinal cord are better diagnosed on the midline sagittal images.

Conclusion: Sagittal midline of image the brain is one of the most important sectional plane in neuroimaging. A good working knowledge of the normal neuroanatomy of the sagittal midline is essential so that the subtle abnormalities that may manifest here can be recognized. Our poster presentation will emphasize these normal variants and highlight various neuropathologies which can be diagnosed and excluded.

058-P

ACUTE PROMYELOCYTIC LEUKEMIA: AN EXPERIENCE FROM A TERTIARY CARE CENTRE IN PAKISTAN**NADIA ALTAF, SHAHTAJ KHAN****DEPARTMENT OF PATHOLOGY, HAYATABAD MEDICAL COMPLEX, PESHAWAR**

Objective: Acute promyelocytic leukemia (APL) is a unique subtype of AML. There are very limited data about APL from Pakistan. The aim of the present study is to evaluate the clinico-demographic profile along with risk stratification of APL at a tertiary care hospital in Pakistan.

Materials and Methods: Between June 2014 and July 2018, 28 patients with APL were enrolled in this descriptive cross-sectional study. All data were documented and statistical analysis was performed by SPSS-20 software.

Results: Median age was 21 (range 2-65) years. Male to female ratio was 3:1 . Hypergranular variant (92.8%) was more common as compared to microgranular type (7.14%). Majority of patients had complaints of fever (71.4%), bleeding (53.5%) and generalized weakness (14.2%). Pallor (64.2%) was the predominant finding on physical examination followed by petechial and purpurial rashes (46.4%). Mean Hemoglobin was 8.3 (range 5.3-12.2) g/dl. The mean total leukocytes count was 39.6 (range 1.3-121) x 10⁹/L and mean platelet count was 40 (range 7-78) x 10⁹/L . Most patients fall into high risk group (60.7%) on risk stratification followed by intermediate risk (32.1%) and low risk (7.1%).

Conclusion: In the present study pallor is the most common presentation. Risk stratification shows predominance of high risk score.

059-P

FINE NEEDLE ASPIRATION CYTOLOGY OF AXILLARY LYMPH NODES IN BREAST CANCER PATIENTS.**MARIUM HAMEED¹ NARENDRA SHASTRI MUNGALSINGH²****1 SHAUKAT KHANAM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE, PAKISTAN, 2 WYCOMBE HOSPITAL HIGH WYCOMBE, UNITED KINGDOM**

Purpose: All the patients with a non-operative diagnosis of invasive breast cancer should have ipsilateral axillary ultrasound performed, preferably at the time of initial assessment. If this was not performed initially, it should be done as soon as possible following core biopsy diagnosis of the breast cancer. The number and morphology of any abnormal nodes should be documented¹. No national guidelines are available to give the utility of FNA versus biopsy of axillary nodes. They are regarded as equal, however, we had a couple of difficult experiences in reporting of FNA results, and therefore we decided to do an audit while comparing the two techniques by keeping the histology as gold standard.

Method: The specimens were searched from last two-year period starting from 1st January 2015 to 31 December 2016. All of the axillary lymph node FNA's were searched through Winpath search engine. Only the axillary lymph nodes with breast cancers were separated. Histology was considered gold standard. Out of these all the FNA's which had no follow up histology were excluded. So, in the end 82 FNA specimens were included in the audit. L codes for fine needle aspiration cytology were used (LC1 to LC5).

Results: 82 FNAs were recorded. Fine needle aspiration cytology showed accuracy of 76.3%. The Sensitivity is 70%, specificity is 90.9%, PPV is 94.6% and NPV is 57.1%.

Conclusion: Our LC3 and LC4 calling is relatively lower when compared with other centres. However, a little more consideration is needed regarding overcalling LC3. Despite the comparable results FNA has its limitations regarding sampling of the correct nodes hence the PPV of LC2 being 17%. There is a significant rate of LC1 which is dependent on performer's competency among others

060-P**PAPILLARY LESIONS OF THE BREAST.**

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Introduction: Intraductal papillomatous breast lesions are uncommon and constitute about 2-3% of all tumors of the breast. Most of them originate from the epithelium of lactiferous duct. They are classified as benign, atypical and malignant variants. It is often a difficult task to distinguish the morphology of these histological subtypes. The average age of presentation is 30 to 70 years age group.

Case presentation: We received a left sided breast specimen with the axillary tail of a 32 year old woman in our department. The history provided revealed complaints of subareolar mass and bloody discharge from nipple from the last six months.

Macroscopically: These are well-defined, oval or rounded lesions located within a dilated lactiferous duct, may be pedunculated or broad-based measuring few millimeters in diameter presented as subareolar mass. Malignant tumors may be cystic or solid.

Microscopically: Presented as proliferation of ductal epithelium with or without myoepithelial cells with a fibrovascular core.

Immunohistochemistry: Almost all cases are strongly and diffusely positive for Cytokeratin, CD 10 and ASMA while CK5/6 helps to differentiated between papilloma and papillary carcinoma.

Conclusion: The distinction between benign and malignant papillary lesions based on H&E morphology is very challenging especially in core biopsies. High molecular weight cytokeratin ME markers and basement membrane markers are helpful.

Keywords:

- Intraductal papilloma
- Breast
- Myoepithelial cells

061-P

IMMUNE CHECKPOINT INHIBITORS, ASSOCIATED COMPLICATIONS AND THEIR MANAGEMENT; A REVIEW

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Purpose: In recent advancements for cancer therapy, immune checkpoint inhibitors (ICPIs) are efficacious and widely used therapies mainly against metastatic melanoma, non-small cell lung cancer (NSCLC) and renal cancer. It includes anti-cytotoxic T-lymphocyte-associated antigen 4(anti CTLA-4) antibody and anti-programmed cell death-1(anti PD-1) antibodies. Due to researches to locate more checkpoints, their use is expected to rise exponentially. Herein we attempt to provide an in-depth discussion regarding mode of mechanism, the unique type of adverse effects of this therapy called immune-related adverse events (irAEs) which are lethal if not diagnosed timely and its management.

Method: An extensive literature search was done on Google Scholar and PubMed using keywords “adverse effects”, “systemic complications” and “treatment and management” in association with “immune checkpoint inhibitors”.

Results: The literature suggests that, both immune and tumor cells consist of T cells having negative checkpoints that promote the tumor among which CTLA-4 and PD-1 are quite commonly analyzed clinically. Immune checkpoint inhibitors; anti-CTLA-4 and anti-PD-1, inhibits the signaling of these checkpoints thus preventing inactivation of T-cells. In this regard, drugs approved by FDA include Ipilimumab (anti CTLA-4) against malignant melanoma, Nivolumab and Pembrolizumab (anti PD-1) to treat malignant melanoma and NSCLC, and Nivolumab against renal carcinoma as well. These widely used ICPIs form the basis for the emergence of advanced cancer treatment. Their resulting irAEs includes dermatologic (pruritus), gastrointestinal (diarrhea), hepatic (hepatitis) and endocrine disorders (hypophysitis). Most vital part of managing irAEs in order to avoid life threatening circumstances is know-how of the timings for the onset of expected irAE. In severe cases, steroids guarantee a cure. Hypophysitis, the most common irAE, is managed mainly by replacing deficient pituitary hormones and drug discontinuation, though some authors suggest using steroids. The literature further reveals, few physicians and oncologists are not well aware of the irAEs of all the available ICPIs.

Conclusion: Currently available ICPIs are efficacious in the treatment of melanoma, renal and lung cancers. Ongoing researches are aiming to develop additional checkpoint inhibitors to broaden the spectrum of treatment of ICPIs. Therefore, it's imperative that oncologists take early or late appearing, common or rare forms of irAEs into serious consideration.

062-P

HEPATOBIILIARY SERVICE IN A PUBLIC SECTOR HOSPITAL IN LAHORE

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Objective: To share our experience of management of hepatobiliary cancers in our hospital.

Methodology: All cases of HPB cancer operated in surgical unit 1 LGH from Jan 2017 to July 2018 were included. Indication for surgery, mode of surgery and operative details were recorded. Post operative outcomes were also recorded.

Results: A total of 26 cases were admitted in 1 year. 7 pancreas, 6 periampullary, 4 cholangiocarcinoma, 2 duodenum, 4 gall bladder, 1 HCC. 6 patients were irresectable on imaging and were stented and referred for palliative chemo. 20 cases were operated. 7 whipple, 2 hepaticojejunostomies, 1 radical cholecystectomy, 10 irresectable. 4 patients died during hospital stay. Median hospital stay was 15 days.

Conclusion: Hepatobiliary cancers can be safely managed in public sector hospitals. A recent CT scan can help avoid irresectable surgeries. Laparoscopy prior to resection can help prevent unnecessary resections in patients with peritoneal metastasis.

063-P

BRCA 1 GENE MUTATIONS IDENTIFIED IN FORMALIN FIXED PARAFFIN EMBEDDED MUCINOUS OVARIAN TUMORS**SHAISTA GUL. HISTOPATHOLOGY DEPARTMENT, BASIC MEDICAL SCIENCES INSTITUTE, JINNAH POST MEDICAL CENTER, KARACHI, PAKISTAN**

Objective: The present study was designed to detect *BRCA 1* gene mutations in different histological subtypes of epithelial origin benign, borderline and malignant ovarian tumors.

Material and Methods: This morphological study was based on the analysis *BRCA 1* gene mutations in the epithelial origin ovarian tumors including benign, borderline and malignant serous or mucinous ovarian tumors, Endometrioid carcinomas, Clear cell carcinomas, Signet ring carcinomas, Brenner tumors, Mixed müllerian tumors, Poorly differentiated and Undifferentiated epithelial tumors received at the department of Pathology, BMSI, JPMC, from 01-01-2011 to 31-12-2015. A total of 80 diagnosed cases was selected and analyzed for PCR.

Results: *BRCA 1* gene mutations were detected in 22% cases out of which Serous cystadenocarcinoma were the commonest including 63% cases. *BRCA 1* gene mutations were also detected in other epithelial ovarian tumors including Mucinous cystadenocarcinoma 13.6%, Mucinous borderline tumor 9.09%. Endometrioid adenocarcinoma, Mixed Müllerian tumor and Seromucinous borderline tumors were 4.5% each.

The observations and results of the study were elaborated with the assistance of tables, figures and photomicrographs.

Conclusion: *BRCA 1* gene mutations manifestations were identified in a large number of high grade serous malignant ovarian tumor cases. Small percentages of borderline and malignant mucinous tumors, Endometrioid adenocarcinoma and the Mixed Müllerian tumor were also positive for *BRCA1* gene mutations.

Key Words: Borderline Mucinous Tumors, Mucinous Cystadenocarcinoma, *BRCA 1* Gene.

064-P

ADDED DIAGNOSTIC VALUE OF CT-ATTENUATION CORRECTION IN MYOCARDIAL PERFUSION IMAGING

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Background: Myocardial perfusion imaging (MPI) is a well-established tool for coronary artery disease (CAD) assessment. Soft-tissue attenuation artifacts, mainly due to diaphragm in males and breast in females, are a common pitfall in the diagnostic accuracy of MPI. Non-cardiac setups, like our tertiary care cancer centre, cater cohorts of asymptomatic patients requiring CAD assessment based on co-morbidities and potential risk of oncological treatment e.g. oncological surgery which can benefit from most optimized MPI.

Objective: To review the diagnostic benefits with CT attenuation correction in MPI.

Methods: Thirty patients underwent myocardial perfusion imaging during March and April 2018. Sequential single photon emission computed tomography (SPECT) and computed tomography (CT) images were acquired with hybrid SPECT-CT scanner. SPECT images, displayed as CT-corrected and non-corrected, were retrospectively reviewed and interpreted by qualified nuclear physicians for attenuation artifacts. Body mass index (BMI) was estimated for each patient.

Results: Our data comprised of 15 females and 15 males [average age: 57.3 years \pm 11.3 SD] for evaluation of cardiac ischemia or infarction. ^

A total of 51 perfusion defects were noted in non-corrected SPECT images; apex [n=11], anterior [n=14], inferior [n=16], lateral [n=7] and septal [n=3] walls. Of these, 23 (45%) were confirmed as real perfusion defects on CT-corrected images. Of the remaining 28 perfusion defects, diaphragmatic attenuation was confirmed in 15 cases on CT attenuation correction. SPECT-CT was helpful in the evaluation of 100% of inferior wall defects; 81% [10 males, 2 females] were artifacts, 19% [2 males, 1 female] were real perfusion defects. However, 13 defects were consistent with breast attenuation artifact. In these cases, CT attenuation correction was helpful only in 34% of cases, while the remaining (66%) were characterized on the basis of clinical information, ECG findings and symptoms during stress procedure.

Conclusion: Attenuation correction with CT improves accuracy and diagnostic performance of MPI especially in deciphering diaphragmatic artifact.

065-P

IMAGING CHARACTERISTICS OF VARIOUS MANDIBULAR LESIONS: A PICTORIAL REVIEW

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Background: Mandibular lesions are a frequent imaging finding and they usually represent a diagnostic dilemma. The purpose of this article is to describe the indications and appropriate imaging studies for various jaw tumors and tumor like lesions, the imaging findings and possible differential diagnosis.

Objective: This article intends to make a pictorial review of the most frequent mandibular tumors and tumor like lesions, their imaging findings, emphasizing the aspects that aid in the differential diagnosis; and to present some illustrative examples of these lesions in computerized tomography and magnetic resonance.

Conclusion: It is imperative for radiologists to recognize the indications and appropriate imaging studies for various jaw lesions. Radiography is typically used for first-line imaging. If necessary, it is followed by CT for evaluation of osseous lesions and MRI for characterization of soft-tissue lesions.

066-P**ASSOCIATION OF P53 OVEREXPRESSION WITH HORMONE RECEPTOR STATUS AND TRIPLE NEGATIVE BREAST CARCINOMA****WAQAR AHMED HUMAYUN, KING EDWARD MEDICAL UNIVERSITY, LAHORE, PAKISTAN**

Acquiring a p53 mutation has been suggested to be an early event in breast cancer development relating to poor prognosis and chemo-resistance. There is controversial data regarding association of p53 with triple negative breast cancer. We tried to find out the frequency of p53 expression in various sub-types of breast cancer and its correlation with receptor status having prognostic and predictive significance. A descriptive cross sectional study including 91 female patients of 18-84 years of age was conducted from January 2017 to January 2018. Patients were selected through non-probability purposive sampling. Receptors status including Estrogen Receptor (ER), Progesterone Receptor (PR) and HER2 neu were confirmed with immunohistochemical (IHC) staining. P53 overexpression was also detected by IHC staining and labeled as positive on >10 % tumor cells. The data was entered and analyzed retrospectively in SPSS (Statistical Package for Social Sciences) version 22. Pearson Chi-Square test was used with the help of cross tabulation in order to study the association between p53 and hormone receptors i.e. ER, PR, HER2 neu, keeping the p value ≤ 0.001 as significant and confidence interval of 95%. The obtained results revealed that p53 was positive in 20% (11/55) of ER positive, 13.2% (7/53) of PR positive and 15.1% (8/53) of HER2 neu positive tumors. All of the triple negative breast cancer (TNBC) (15/15, 100%) were immunopositive for p53 overexpression. However, 60% (9/15) of the TNBC showed diffuse and 40% (6/15) focal p53 staining. The present study did not reveal any significant correlation between p53 expression and advancing grade of tumor, as we observed 60% (9/15) positivity in grade II tumors and 40% (6/15) in grade III. The p53 overexpression was found less frequent in hormone receptor positive breast cancers similar to that of reported in the literature. In contrast, we observed 100% (15/15) p53 overexpression in TNBC as compared to previously reported one (30-80%). This could be due to smaller sample size used. However, since p53 overexpression is associated with somatic mutations, the present results could suggest that our patient population has higher frequency of p53 mutation in TNBC, thus warranting newer anti p53 targeted therapy.

067-P

SPINDEL CELL DEDIFFERENTIATED LIPOSARCOMA: A CASE REPORT**JUNAID ASLAM, DEPARTMENT OF RADIOLOGY, HARTFORD HOSPITAL, CONNECTICUT, USA.****THOMAS FARQUHAR, DEPARTMENT OF RADIOLOGY, HARTFORD HOSPITAL, CONNECTICUT, USA.**

Purpose/Objectives: Review and Discuss Dedifferentiated liposarcoma, Clinical presentation of Dedifferentiated liposarcoma Imaging findings and diagnosis of Dedifferentiated liposarcoma, Pathology and Genetics, Treatments of Dedifferentiated liposarcoma

Material/Methods: Case Report from archives of Hartford Hospital, and Jefferson Radiology.

Results: This Case highlights a case of 62 years old female with past medical history of rheumatoid arthritis, and alcoholic cirrhosis. She was admitted for sepsis and right upper quadrant pain. Her abdominal ultrasound showed a lobular heterogeneous solid mass with internal vascularity within the mid-abdomen. MRI of the abdomen and pelvis showed the large abdominal mass to be distinct from the liver, kidneys, pancreas or adrenal glands. There was mass effect on the right colon however, origin of mass was not clearly demonstrated. CT of abdomen and pelvis demonstrated the right mid-abdominal mass which appear contiguous with the ascending colon with medial displacement measuring 12.1x 8.1 cm. Biopsy of the mass and liver were obtained.

Initial pathology results showed spindle cells and at least a low grade sarcoma. Additional immunohistochemical and genetic studies showed a Stage III Dedifferentiated liposarcoma of the right colon mesentery. Mass was resected and right hemi-colectomy was performed with negative margins (R0). The liver biopsy was absent for definite findings of cirrhosis with low inflammatory grade and mid-level fibrosis stage likely secondary to abstinence program for 22 years.

Conclusion: This case highlights the rare mesenchymal malignancy known as Dedifferentiated liposarcoma with its presentation and imaging feature while also reviewing the pathogenesis, and treatment options. Dedifferentiated liposarcoma is the least common subtype of liposarcoma. It can arise at any location in body although most commonly occurs in the extremities, or retroperitoneum. There is no gender predilection and it can affect any age group although most patients are over the age of 60 years and have 54%-64% overall survival. Dedifferentiated liposarcoma are usually clinically silent or present with non-specific vague symptoms such as abdominal pain, weight gain, and possibly palpable mass. In addition, it may compress adjacent organs leading to additional complications. Dedifferentiated liposarcoma is thought to usually arise from or progress from a well-differentiated liposarcoma. Abdominal Dedifferentiated liposarcoma have nonspecific imaging features which often overlap other pathologies such as gastrointestinal stromal tumor (GIST), mixofibrosarcoma (MFH), leiomyosarcoma, lymphoma, angiomyolipoma, melioliopma in addition to other liposarcoma. This makes the diagnoses very difficult and biopsy is required for definitive diagnosis. Fluorescence in situ hybridization analysis (FISH) is often used to check for MDM2 (murine double minute) gene amplification. This oncogene maps to 12q15 and its expression plays a role in controlling cell cycle. Using FISH to detect MDM2 gene amplification can help differentiate well-differentiated liposarcoma from dedifferentiated liposarcoma. The location and mitotic count are important prognosis factors. Treatment includes wide surgical excision with negative margins. Some recommend adjuvant radiation therapy in patients with positive margins with studies showing chemotherapy to be not useful as part of treatment regime.

068-P

Tc-99m SESTAMIBI SPECT-CT SCINTIGRAPHY FOR DIFFERENTIATING RENAL ONCOCYTOMA FROM RENAL CELL CARCINOMA – A PICTORIAL

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Background: Differentiation of oncocytoma from renal cell carcinoma (RCC) on cross-sectional imaging remains a challenge. Compared with other renal masses, oncocytomas have unique ultrastructure with densely packed mitochondria. Gormley proposed that oncocytomas can be differentiated from RCC using non-invasive mitochondrial imaging agent 99mTc-sestamibi with reported sensitivity of 87.55 and specificity of 95.2% [1]. Oncocytomas demonstrate high sestamibi uptake. Sestamibi non-avid tumors are subjected to surgical resection, while avid masses can be safely put on surveillance.

Case 1: A 52-year old male patient presented with an incidental right renal mass. Contrast enhanced CT scan revealed a 4.8cm heterogeneously enhancing, well encapsulated mass in anterior interpolar region of right kidney. Appearance was suggestive of primary renal tumor. Oncocytoma was in differential diagnosis. Tc99m-sestamibi acquired after intravenous injection of 815 MBqs demonstrated no abnormal radiotracer uptake in the right renal mass. Metabolic findings did not favor oncocytoma and patient underwent right radical nephrectomy. Histopathology was consistent with clear cell RCC.

Case 2: A 48-year old female patient was diagnosed to have right renal mass on workup for right lumbar pain. Contrast enhanced CT demonstrated well encapsulated, homogenous signal density mass involving anterior half of interpolar/lower pole of the right kidney. This measured 67 x 47 mm, without any significant perinephric fat infiltration or venous extension. On Tc99m-sestamibi scan acquired after 798MBqs of tracer injection, there was no abnormal activity in this renal mass and clinical suspicion of RCC was high. Histopathology after right radical nephrectomy turned out to be chromophobe RCC.

Case 3: A 71-year old male patient diagnosed hypertension, diabetes and ischemic heart disease, presented with an incidental finding of left renal mass. MRI abdomen demonstrated a large solid/cystic interpole left renal tumor measuring 6 x 4.9 x 6.3 cm. Anterior nodular projection of tumor was extending into the renal sinus. Further work up with Tc99m-sestamibi scan acquired after 829 MBqs of radiotracer injection showed absent radiotracer activity in left renal mass. Renal mass was labeled as RCC. Surgery was deferred due to multiple comorbid.

Conclusion: 99mTc-sestamibi SPECT-CT scintigraphy is a valuable metabolic imaging tool in distinguishing benign renal oncocytoma from renal cell carcinoma.

Reference: 1-Gorin MA et al. Propective evaluation of Tc99m sestamibi SPECT/CT for the diagnosis of renal oncocytomas and hybrid oncocytic/chromophobe tumors. *European Urology* 69(2016)413-416

069-P

A RARE PRESENTATION OF INTRACRANIAL TERATOMA INVADING THE NASAL CAVITY MIMICKING OLFACTORY NEUROBLASTOMA- A CASE REPORT

ASAD ALI

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Rationale: Primary intracranial immature teratoma accounts for majority of congenital central nervous system germ-cell tumors, but it is extremely uncommon in patients older than 15 years.

Patient concerns: A 30-year-old woman was referred to our hospital for headache, nasal congestion, and decreased olfactory sensation. Imaging showed a large infiltrating mass measuring in the right frontal lobe, which also filled the right nasal cavity.

Histopathologically, the intracranial tumor tissues were composed of both mature tissues, including glands and squamous epithelial cells and immature neuroectodermal components. However, the tumor tissues in the nasal cavity were mainly immature neuroectodermal components that mimicked olfactory neuroblastoma. The cells stained positively for neuron-specific enolase, Alpha Thalassemia/Mental Retardation Syndrome X-Linked, and Oligodendrocyte transcription factor on immunostaining, proving a neuroectodermal differentiation.

Diagnoses: According to these findings, the tumor was diagnosed as a primary intracranial immature teratoma that also involved the nasal cavity after excluding the metastatic tumors.

Interventions: The patient underwent 2 surgeries. The first surgery was via the subfrontal approach, followed by a second endoscopic sinus surgery.

Outcomes: The patient had no recurrence within a 6-month follow-up after the last surgery.

Lessons: When an intracranial immature teratoma involves the nasal cavity, the lesions in the nasal cavity may mimic other tumors including olfactory neuroblastoma. We suggest that thorough examination of tumor tissues and identification of variable components are critical for the appropriate diagnosis of intracranial immature teratoma, a rare tumor.

Abbreviations: CNS = central nervous system, CT = computed tomography. **Keywords:** case report, immature teratoma, intracranial, nasal cavity, olfactory neuroblastoma

070-P

DOSIMETRIC COMPARISON OF INTENSITY MODULATED ARC THERAPY (IMRT) AND VOLUMETRIC MODULATED ARC THERAPY (VMAT) WITH A RAPID ARC IN CERVIX CARCINOMA

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Introduction: Intensity modulated radiation therapy (IMRT) allows dose intensification and to improve target coverage and at the same time reducing the radiation dose to organs at risk (OARs) and volumetric modulated Arc Therapy (VMAT) or Rapid arc radiotherapy that delivers precise dose with a revolution of 360-degree in a single or multi-arc treatment of gantry for the patients with cervical carcinoma. In this study, we compare dosimetric parameters for IMRT and volumetric intensity-modulated arc therapy (VMAT) of the patients with cervical carcinoma.

Material and methods: We selected 20 patients being treated for localized cervical cancer. In the selected patients 10 were originally treated with an Intensity modulated radio therapy (IMRT) technique and 10 patients with cervical carcinoma treated with Rapid arc technique. As per radiation therapy oncology group (RTOG), on CT images for gross target volume (GTV), clinical target volume (CTV) and planning target volume (PTV) contouring was done by an oncologist. And OARs were also marked out. The dosimetric parameters include Conformity Index, New conformity Index, Paddick conformity Index, Homogeneity Index, Radical dose homogeneity Index, Moderate dose homogeneity Index, Uniformity Index, Gradient Index and Coverage were calculated for the evaluation of plans and also calculate doses to OARs. Two sample paired t-test has been performed to contrast the dosimetric dissimilarities between IMRT and Rapid Arc plans for statistical analysis. The value of $p < 0.05$ for statistically significant.

Results: For IMRT and VMAT with rapid arc the mean values for Conformity Index is 0.96. For New conformity Index and for Paddick conformity index the mean value is 1.06 and 0.93 for both techniques respectively. The mean value of homogeneity index for IMRT is 0.15 and for Rapid arc, the mean value is 0.14. Whereas the mean value of radical dose homogeneity index is 0.68 for IMRT and 0.66 for Rapid arc and for moderate dose homogeneity index the values are 0.90 and 0.91 for IMRT and rapid arc respectively. The uniformity index has the mean value of 1.11 and 1.09 for IMRT and Rapid arc respectively. The Gradient Index has the value 1.03 for both techniques. IMRT has a value of coverage which is 0.81 and Rapid arc has value 0.83. By using rapid arc technique the OARs doses decrease as compared to IMRT except for the dose of a small bowl.

Conclusion: VMAT has the ability to reduce treatment time over IMRT although OAR sparing and planning target volume (PTV) coverage is the same. Throughout VMAT treatments, there will be a lesser possibility of patient movement. The vital distinction between IMRT and the Rapid arc is the capability to adjust the beam control.

071-P

COMPARISON OF ELECTRONS AND PHOTONS TREATMENT PLANS IN MEDULLOBLASTOMA PATIENTS

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Introduction: The treatment of medulloblastoma involves surgery, radiotherapy and adjuvant chemotherapy. In radiotherapy, craniospinal irradiation (CSI) is prescribed, where two lateral cranial fields and one or two spinal beams are applied in CSI [1-6]. Different multi-field techniques (coplanar and/or noncoplanar) are used to register the prescribed dose. The purpose of this study was to assess plan quality in terms of dose coverage of spine with both photon and electron beam therapy and sparing of organ at risks.

Material and Methods: Ten paediatric patients (age 6-10 years) were immobilized in the prone position for simulation. The CTV, PTV and OARs were contoured. Prowess Panther (v4.71) was used for dose computations. Two lateral parallel-opposed 6 MV photon cranial fields with the spinal beam(s) (either 6 MV photons or 21 MeV electrons) were used in planning. Electron beams were added posteriorly on the spine with parallel-opposed cranial fields. The electron and photon dose distribution in one of the treatment plan is given in Figure 1. The treatment plans were computed for 3600 cGy in 21 fractions.

Results and Discussion: For comparable conformity number of electron versus photons beam plans (0.68 \square \square 0.41 versus 0.66 \square \square 0.47, not significantly different at $p < 0.05$) and homogeneity index (1.22 \square \square 0.03 versus 1.25 \square \square 0.04, significantly different at $p < 0.05$), the photon doses were higher for underlying OARs (heart, liver and thyroid) and were lower for partially in-field organs (lungs and kidneys) compared to electrons as shown in Figure 2.

Conclusion: The underlying organs i.e. thyroid, heart and liver receive lesser dose in case of electrons while partially in-field organs are exposed more compared to photons mainly due to

ballooning effect in electrons. The study shows that both electrons and photons can be used for CSI, however electron may be preferred due to better sparing of underlying structures.

072-P

BROWN TUMORS ON 99MTC-MIBI SCINTIGRAPHY AND SPECT/CT**NAZIA RASHID, AAMNA HASSAN.****NUCLEAR MEDICINE DEPARTMENT, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE. LAHORE, PAKISTAN**

Objectives: Purpose of this pictorial is to review the detection of brown tumor on 99mTc-MIBI parathyroid scintigraphy (PS) with SPECT/CT imaging at SKMCH&RC.

Material and methods: Retrospective review of parathyroid scan and SPECT/CT with the detection of brown tumors from 1st January 2013 to 31st July 2018 at Shaukat Khanum Memorial Hospital and Research Centre Lahore.

Introduction: Primary hyperparathyroidism is a disease with excessive parathormone (PTH) secretion. Increased PTH increases calcium resorption from skeletal system, which results in bone loss and rapid osteoclastic turnover. Severe bone loss leads to fibrotic/cystic bony changes which is called Brown tumor (BT). BTs are rare and reported incidence is less than 2% in patients with any form of hyperparathyroidism¹. 70% to 80% of primary hyperparathyroidism remain asymptomatic². Current management of hyperparathyroidism is minimally invasive surgery, which needs precise localization of diseased parathyroid gland. PS with 99mTc-MIBI has a reported sensitivity of 98%³. SPECT/CT has a higher sensitivity [planar (70%), SPECT (74%) and SPECT/CT (86%)]⁴.

CASES: CASE 1: 49-year-old male with complaint of generalized bony aches and pains for three months. PTH = 1107pg/ml. Thyroid ultrasonography: 5.5 x 4.9mm and 5.2 x 5.9mm enhancing areas in the right and left lobes respectively. Patient was referred for parathyroid scintigraphy to evaluate the presence of parathyroid adenoma.

Scan findings: functioning right inferior parathyroid adenoma with multiple lytic lesions (brown tumors) throughout the imaged skeleton.

CASE 2: 25-year-old female referred for parathyroid scintigraphy to localize parathyroid adenoma. PTH = 573.3, Ca = 11.9, ALP = 1470.

Scan findings: Large hyper-functioning left sided parathyroid adenoma. Multiple destructive osseous lesions throughout the axial and appendicular skeleton consistent with brown tumors.

CASE 3: 22-year-old female with history of multiple fractures after minor trauma and nephrolithiasis. Brown tumors on x-ray. PTH = 1332 (1/11/17), vitamin D = 13.

Scan findings: Hyper-functioning parathyroid tissue in left para-tracheal region. Widespread axial and appendicular skeletal changes consistent with multifocal brown tumors and demineralization as described above.

Conclusion: Functional parathyroid scintigraphy complemented by SPECT/CT can show unsuspected brown tumors in symptomatic patients.

073-P**CAN EXTRAPULMONARY MALIGNANCIES CAUSE PULMONARY CAVITATION AND CONSOLIDATION? ET TU HODGKIN'S LYMPHOMA?****SHAHEEN FATIMA, JUNAID ZAFFAR**

Introduction: Hodgkin's lymphoma can spread to extranodal sites. Pulmonary involvement as single or multiple nodules can occur in up to 40 % cases and cavitary lesions can occur in less than one percent of these patients.

Case Report: 21 years old female presented to our department with history of fever, dry cough and weight loss for 1 year along with cervical and axillary lymph node enlargement. Chest x-ray and HRCT chest showed cavity in the posterior segment of right upper lobe and consolidation in the anterior segment of right upper lobe. She had received full antituberculous treatment for 6 months but had no improvement in her symptoms. We performed her bronchoscopy and the bronchoalveolar lavage did not show AFB on fluorescent staining and microscopy. Moreover, BAL was also negative for acid fast bacilli on culture and sensitivity. Her lymph node biopsy showed atypical cells with multilobulated nuclei and eosinophilic nucleoli arranged against inflammatory infiltrate composed of plasma cells, lymphocytes and eosinophils. Immunohistochemical stains for CD 30, CD 15 and PAX 5 were positive in these leisonal cells, favoring diagnosis of classical Hodgkin's Lymphoma. Patient was therefore diagnosed as case of Classical Hodgkins lymphoma with pulmonary involvement and referred to oncology department where ABVD chemotherapy regimen was advised.

Conclusion: Cavitary lesions in lung can be misdiagnosed as tuberculosis. These should be cautiously worked up for other etiologies.

Key Words: Hogkin's lymphoma, cavitation, consolidation , bronchoalveolar lavage

074-P

ROLE OF STAGING LAPAROSCOPY IN PATIENTS UNDERGOING PANCREATODUODENECTOMY

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Introduction: Staging laparoscopy helps detecting small volume liver and peritoneal metastatic disease not picked up on standard imaging in patients planned for pancreaticoduodenectomy with curative intent. Identifying this subset of patients can help prevent unnecessary laparotomy, especially with advancement in endoscopic palliation techniques. We aim to evaluate the role of staging laparoscopy in patients undergoing pancreatoduodenectomy for pancreatic/periampullary tumors at our institution.

Methods: All patients planned for pancreatoduodenectomy who underwent staging laparoscopy between September 2014 and August 2015 were included. Findings at laparoscopy and whether a change in management plan occurred was recorded.

Results: Between September 2014 and April, 2017, a total of 71 patients underwent staging laparoscopy before pancreatoduodenectomy. 48 were males with 23 were females. Out of 71 Patients 13 patients had suspicious and one patient had cirrhotic liver on staging laparoscopy. 07 patients were found to have liver lesions, 03 patients had peritoneal nodules and 03 patients had both liver and peritoneal lesions. Among patients with liver lesions, 03 patient had metastatic pancreatic adenocarcinoma, one had metastatic neuroendocrine tumour, while all other lesions were benign on histopathology. Management plan was changed in 05 patients due to staging laparoscopy. 03 patient was planned for curative resection but liver lesions consistent with metastatic pancreatic carcinoma were found making them irresectable. Liver lesion in one patient showed a neuroendocrine tumor thus making him potentially resectable. In one patient with resectable disease had cirrhotic liver on laparoscopy and made unfit for this resection.

Conclusion: Staging laparoscopy is a useful investigation for patients planned for pancreatoduodenectomy with curative intent as it helps to detect small volume peritoneal and liver metastatic disease. If any liver or peritoneal lesions are encountered, biopsy is useful in differentiating benign lesions from metastatic disease.

075-P

REVIEW OF CERVICAL CANCER MANAGEMENT

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Cervical cancer is the second most common cancer in women worldwide. Cervical cancer affects young women in developing countries, with no effective screening. In UK, National screening programme have reduced cervical cancer mortality by 60%.

Important advances have taken place in the diagnosis and treatment of this cancer in recent years particularly fertility sparing surgical treatment in early stage disease and introduction of sentinel lymph node assessment.

We conducted a retrospective study of managements of cervical cancer patients diagnosed in North Cumbria University Hospital (NCUH)NHS Trust.

Objective: To assess and compare the stage at diagnosis, management and outcome of treatments for cervical cancer patients referred with abnormal smear results by NHS national screening programme (screen detected) with non-screen detected cervical cancer patients.

Methods: All patients diagnosed with cervical cancer at NCUH during study period were identified from trust cancer data. Case notes were reviewed to record patient's characteristics, presentation and referral pathway. Stage of disease at diagnosis, treatment of cervical cancer, oncological and reproductive outcomes were compared between screen detected and non-screen detected patients.

Results: 93 patients were diagnosed with cervical cancer during study period. 51/93(55%) were screen detected. 49/51(96%) of screen detected patients were diagnosed in stage 1 as compared to 38% of non-screen detected patients whereas 26% of patients in latter group were diagnosed in stage 4.

49/51(96%) screen detected patients were treated by surgery whereas only 30% of non-screen detected patients were suitable for surgical treatment.

Fertility sparing surgical treatment was undertaken in total of 28/93 (30%). 96% of patients received fertility sparing treatment were screen detected. Six patients achieved pregnancies after fertility sparing treatment. Five resulted in live birth at term and one patient was pregnant at the time of data collection. Out of 39 patients who had pelvic lymph node dissection, 5 had sentinel lymph node assessment. 7 patients had recurrence during follow up with average recurrence interval of 10 months. Conclusion: Cervical cancer detected from screening referral pathway are diagnosed with early stage disease and more likely to have fertility sparing surgical treatment.

076-P

EPIDEMIOLOGY OF CUTANEOUS MALIGNANT MELANOMA IN PAKISTAN: INCIDENCE, CLINICAL SUBTYPES, TUMOR STAGE AND LOCALIZATION

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Background: The worldwide incidence of cutaneous melanoma (CM) has been on the rise over the past few decades. Primary prevention and early treatment remain the focus of management to reduce the burden of disease. This entails identification of risk factors to prompt early diagnosis. In Pakistan, there is a scarcity of clinico-pathological data relating to cutaneous malignant melanoma.

Objective: The purpose of this study was to analyze epidemiological and clinical characteristics of patients presenting with cutaneous malignant melanoma in Pakistan, and to compare the results with other studies

Method: Shaukat Khanum Memorial Cancer Hospital and Research Centre is currently the only dedicated cancer hospital in the country, accepting patients from all over Pakistan. Majority of the patients however, belong to the northern half of the country. From the recorded data of the hospital, all cutaneous melanoma cases were identified and evaluated

Results: Between 1997 and 2017, a total of 169 cutaneous melanoma patients were registered at Shaukat Khanum. Mean age was 47.5 years. The highest incidence of melanoma was seen in the age group 40-59 years (n=69, 40.8%). Most commonly reported clinical subtype was unspecified melanoma (n=154, 91%). Amongst those in which T stage was reported, the most frequently observed T-stage at presentation was T4 (n=23, 13.6%). With regards to body distribution, in our study CM was seen most commonly in the lower limb including hip. The yearly incidence of melanoma has increased/ remained stable from 2007 to 2017.

Conclusion: cutaneous malignant melanoma is a fairly common disease in Pakistan. Patients tend to present at more advanced stage as compared to patients in developed countries. Identification of risk factors and tumor characteristics is therefore of paramount importance to deal with these patients

Key words: cutaneous malignant melanoma, Pakistan

077-P**30 DAY OUTCOME OF VENTRICULO-PERITONEAL(VP) SHUNT SURGERY AT A TERTIARY CARE CANCER HOSPITAL****Y RASHEED, I YOUSAF. DEPARTMENT OF SURGICAL ONCOLOGY, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, M A JOHAR TOWN , LAHORE. PAKISTAN**

Objectives: To determine the incidence of complications related to ventriculoperitoneal shunt procedure performed in patients at a tertiary care Cancer hospital.

Material and Methods: patients who underwent surgery for primary ventriculoperitoneal shunt (VPS) at Shaukat Khanum hospital between November 2014 and July 2017 were included. The electronic data base system was used to identify patients who were readmitted within 30 days of the procedure date. Notes were reviewed to identify the reason for readmission specifically to identify cases with infection and shunt malfunction.

Results: Ventriculoperitoneal shunt insertion was performed in 63 patients. Amongst these patients 38 (60.9%) were male and 25(39%) were females. Mean age of patients undergoing this procedure was 29 years. All of these patients had a diagnosis of cancer and amongst the patients in whom VP shunting was done, primary brain tumor was the most common diagnosis (67%). Most patients were given ceftriaxone as prophylactic antibiotic (87%). Median hospital stay was 4 days post procedure. 30 day readmission post procedure was 1.5% (n=1). This patient was admitted with seizures.

Conclusion: .In our cohort of 63 patients there was no incidence of shunt malfunction and infection as compared to an international incidence of infection rate of 6% . Although the number is small the results indicate that infection and early shunt malfunction in surgery for VP shunt procedure can be reduced to a minimum as these complications can severely affect patient quality of life

078-P

THE SUBMENTAL ISLAND FLAP AS AN ALTERNATIVE TO MICROVASCULAR FREE FLAP RECONSTRUCTION IN HEAD AND NECK CANCER RELATED DEFECTS- ARE WE ONCOLOGICALLY SAFE?

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Abstract:

Introduction: In head and neck surgery, free flap is considered as the standard of care in the oral cavity reconstruction; however, because of the complexity, time consumption, cost, and level of expertise required in the procedure, its use is slightly limited in specific circumstances. The submental flap provides an alternative technique in oro-facial reconstruction, especially in situations where free flap services are not available. The oncological safety of submental flap is thought to be controversial. The objective of this study is to demonstrate the safety and benefits of this flap in oral cavity reconstruction.

Material and method: A total of 27 cases with oral cavity cancers, which underwent submental flap reconstruction from 2015-2017 at Shaukat Khanum Cancer Memorial hospital, were included. We have retrospectively reviewed records of these patients.

Results: There were 20 male and 2 female patients with age ranging from 21 to 73 years. Most common primary tumor sites were buccal mucosa (13), tongue (7), and lower alveolus (7). All patients underwent ipsilateral selective neck dissection after flap was harvested. Complete flap loss occurred in 3 whereas 1 patients had flap dehiscence that subsequently healed. Mean follow-up was 11 months. There were 4 regional recurrences but no local recurrence. On the last follow-up (minimum 6 months), 15 patients were alive without any disease, 4 were alive with disease and 3 had died.

Conclusion: Submental flap is a satisfactory option for oral cavity reconstruction. However, pre-operative selection of clinically neck node negative patient is extremely important as it has potential risk of occult metastasis.

079-P

CLINICAL OUTCOMES OF HIGH GRADE NON MUSCLE INVASIVE BLADDER CANCER TREATED WITH INTRAVESICAL BACILLUS CALMETTE GUERIN (BCG)**MUHAMMAD ARSHAD IRSHAD KHALIL, NOUMAN KHAN, AZFAR ALI, KHURRAM MIRSURGICAL ONCOLOGY DEPARTMENT, SHAUKAT KHANUM CANCER HOSPITAL & RESEARCH CENTRE, LAHORE.**

OBJECTIVE: Treatment of high grade non muscle invasive bladder cancer (HG NMIBC) is challenging due to its high rate of recurrence and progression to muscle invasive bladder cancer (MIBC). Intravesical Bacillus Calmette Guerin (BCG) is the current treatment of choice in management of high grade NMIBC. The objective of this study is to determine clinical outcome of intravesical BCG treatment and to identify prognostic factors for recurrence & progression in high grade NMIBC in our population.

METHODS: Reterospectively reviewed the data of all the high grade NMIBC patients who were treated with 6 cycles of intravesical BCG from January 2010 to June 2016 at Shaukat Khanum Cancer Hospital & Research Centre Lahore. Recurrence & progression were determined by check cystoscopy & upper track imaging. Prognostic significance of age, gender, BMI, smoking, tumor size, tumor outlook, multiplicity for recurrence & progression were analyzed using SPSS version 20.

RESULTS: A total of 99 patients (male=89, female=10) were included with mean age of 62years \pm 10.97. After a median follow up of 24 months (IQR: 12, 39), 47(47.5%) patients had recurrence & 15(15.2%) progressed to MIBC. Regarding prognostic factors, patient characteristics like age >70, female gender, BMI >30 and smoking had no association with recurrence and progression. Recurrent high grade, tumor size >3cm, multiplicity had significantly association with recurrence and progression. Non papillary tumors are found to be significantly associated on univariable but not on multivariable analysis.

CONCLUSION: Recurrent High grade NMIBC patients with large multiple tumors had high risk of recurrence and progression, and therefore must be treated aggressively.

080-P**PERIOPERATIVE ANTIBIOTIC PROPHYLAXIS WITH RESPECT TO INCISION TIME****UMAIR AHMAD, S S ALI.****SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, M A JOHAR TOWN ,
LAHORE. PAKISTAN**

BACKGROUND: Perioperative antibiotic prophylaxis (PAP) is routinely given before surgical intervention to avoid surgical site infection which is one of the major cause of morbidity and mortality in patients and reflects on patient care.

OBJECTIVE: The study is aimed:

- a) To evaluate time difference between PAP and Incision time
- b) To establish and implement International guidelines regarding PAP in our setting, which state that PAP should be administered within 60 minutes before the incision

MATERIAL & METHODS: This audit included 151 patients who were undergoing surgical interventions from 14th July 2018 to 2nd August 2018 at Shaukat Khanum Memorial Cancer Hospital Lahore. The data was collected with the help of a designed performa and was statistically analyzed by calculating percentages.

RESULTS: In this audit a total of 151 cases were included, further divided into Urology (34), Breast (32), Head and Neck (25), Abdominal (20), General Surgery (11), Orthopedic (8), Pediatric (8), Hepatobiliary (6), Neurosurgery (4) and Thoracic (3) cases. In 122 (80.8%) patients PAP was given, out of which 93 (76.2%) cases the time difference between PAP and incision time were recorded on hard copy, and in 29 (23.7%) cases the time of antibiotic given was not recorded on hard copy although it was verbally confirmed to be within 60 minutes before the incision during time-out. In 29 (19.2%) patients who were not given PAP were minor, day case procedures. The data further showed that the patients who received PAP, 121 (99.2%) patients were within 60 minutes and 1 patient (0.8%) was beyond 60 minutes with respect to incision time.

CONCLUSION: The study results showed that there were 29 cases in which time of antibiotic given was not recorded on hard copy and emphasis should be given on proper documentation as this will help in improving patient care. Also, it was found that there was 1 case in which PAP was given beyond the 60 minutes window. As international guidelines have established that PAP should be given within 60 minutes before incision, there should be proper time management so that we can avoid surgical site infections.

081-P**COMPARTMENTAL RESECTION FOR RETROPERITONEAL SARCOMAS TO ACHIEVE LOCAL CONTROL**

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Objectives: The major challenge in the management of retroperitoneal sarcomas is the ability of achieve local control owing to involvement of multiple contiguous viscera. Local recurrence is an important cause of death. Systematic en-bloc resection of surrounding viscera even when not directly invaded minimizes the risk of residual disease.

Methodology and Results: Pictorial description of en-bloc resection of retroperitoneal sarcomas including ipsilateral colon, mesocolon, kidney and adrenal gland alongwith the psoas muscle is provided. The adventitia along the iliac vessels, aorta and vena cava is resected with the specimen to achieve negative margins.

Conclusions: All efforts should be made to achieve negative resection margins for retroperitoneal sarcomas as this provides the best chance of achieving potential cure. En-bloc resection of contiguous organs even without gross involvement and close resection of critical structures including adventitia of great vessels helps achieve this goal.

082-P

DEVELOPING AN INTEGRATED MULTIDISCIPLINARY SOFT TISSUE SARCOMA AND PERITONEAL SURFACE MALIGNANCY PROGRAM WITHIN A SURGICAL ONCOLOGY SERVICE

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Objectives: Optimal management of locally advanced or metastatic cancers is a specific challenge, especially in resource limited settings. Soft tissue sarcomas (STS) and peritoneal surface malignancies (PSM) represent complex pathologies with significant technical challenges to achieve loco-regional control and acceptable oncological outcomes. We look at our journey as a surgical oncology service in providing integrated multidisciplinary care to patients with STS and PSM.

Methodology: A surgical oncology service with special interest in management of STS and PSM started working on developing expertise as well as bringing together a multidisciplinary team of individuals with common interests. The important milestones to achieve was acquiring technical skills as well as developing international collaborations with expert centres for mentoring. This included enrollment in recognized courses as well as attachments in expert centres through an international training program. In addition multidisciplinary teams for management of these specific problems were brought together to facilitate decision making in collaboration with an international expert. Individualized pathways were developed for evaluation and perioperative care for these patients.

Conclusions: With a methodical approach attempting to acquire technical expertise through collaboration with international expert centres and developing a multidisciplinary process of care for patients with STS and PSM, we have started a service previously unavailable in the community. This model can be progressed further to eventually develop an expert centre that can further contribute to the community by providing expert care to patients as well as training future expert clinicians in management of STS and PSM.

083-P**MANAGEMENT OF CA APPENDIX – AN INSTITUTIONAL EXPERIENCE**

AUTHORS: TABISH SALEEM ,OSAMA SHAKEEL, AWAIS AMJAD MALIK, SADAF BATOOL,IRFAN-UL-ISLAM NASIR, AAMIR ALI SYED, SHAHID KHATTAK.
SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, M A JOHAR TOWN , LAHORE. PAKISTAN

ABSTRACT:

Introduction: To study the surgical and oncological outcome of all the patients presenting with a diagnosis of Ca Appendix at SKMCH&RC.

Methodology: From 2006 to 2017 all patients with a diagnosis of Ca Appendix were included in the study. Demographic variables were collected. Surgical outcomes in terms of operation performed and its complications were recorded. Short and long term oncological outcomes were recorded. All data was entered and analyzed in SPSS ver 21.

Results: A total of 19 patients were included in the study. Median age was 58 years. There were 7 male and 12 female patients. Most common presentation was pain RIF in 16 patients followed by altered bowel habits in 3 patients. 17 patients had an adenoca and 2 had Neuroendocrine Ca. 13 patients had a standard right hemicolectomy performed. 5 only had an appendectomy performed. One patient had a TAH BSO + appendectomy. 12 patients received adjuvant chemotherapy. 8 patients had a disease recurrence. All patients had a median survival of 24 months.

Conclusion: Cancer of the appendix is rare and needs to be managed aggressively. All patients are best treated with a formal right hemicolectomy with adjuvant chemotherapy.

084-P

INDICATION AND COMPLICATIONS OF SURGICAL GASTROSTOMY IN A TERTIARY CARE SETUP

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SHERYAR RIAZ ; SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, M A JOHAR TOWN , LAHORE. PAKISTAN

Objective: This study aimed to identify indications and complications associated with surgical gastrostomy in a cancer hospital. We perform surgical gastrostomy in patients with head & neck or esophageal carcinoma in which it is not possible to perform gastrostomy endoscopically or through radiological guidance which are unable to maintain enteral Feeding.

Material and Method: 80 Patients who underwent surgical Gastrostomy at our Hospital from 2006 - 2018 were included in the study Non-Randomized, Retrospective analysis of the Medical Records and then data was retrieved from HIS, Demographics, Primary Diagnosis, Indications were recorded Mode of Surgery, Type of Gastrostomy Tube, its size, per-operative Time and related complications, time to initiate Feeding were also noted

Results: Out of 80 patients 38 were male and female were 42. 26.2% Patients were diagnosed to have Ca-Esophagus, 57.5% were having cricoid Ca and rest 18% included Hypopharyngeal Ca(15%) and Ca Tongue(1.3%). Median age noted was 50 years. Operative technique applied was Stamm Gastrostomy in which 32.5% were laparoscopic and 67.5% Open. Median Operative time was 53 minutes; Median time of feeding start was 24 hours. 74% underwent surgical Gastrostomy due to Unsuccessful PEG Tube + RIG insertion, 15% due to dislodged PEG tube, tumor perforation (3%), Stricture(5%) and Emergency Gastrostomy(3%). Most common Material used was 71.2% Folley's catheter 25.6% Gastrostomy Tube and 2.6% T-Tube. 33.3% patient developed infections late and early at some stage, 28.2% had leakage and 31% had their gastrostomy tube changed for either obstruction or dislodgement.

Conclusion: Surgical gastrostomy, while considered a smaller procedure, is not without complications. The Stamm technique, despite the complications reported, is easy to perform and to handle, as well as safe.

085-P

CASE REPORT OF LAPAROSCOPIC ANTERIOR RESECTION PRESENTED WITH PORTAL VEIN AND SUPERIOR MESENTERIC VEIN THROMBOSIS

OSAMA SHAKEEL

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Abstract:

Purpose: This case report describes a case of superior mesenteric and portal vein thrombosis (PVT) following laparoscopic-assisted anterior resection for a sigmoid colon carcinoma without liver metastases.

Methods: A retrospective case review was performed.

Results: A 43 year old female, presented with altered bowel habits, bleeding per rectal and loss of weight for the last 10 months. CT scan performed which showed mass in sigmoid colon which was confirmed as adenocarcinoma of sigmoid colon on endoscopic biopsy . Laparoscopic assisted anterior resection was performed. Following smooth recovery, she was discharged on 5th post-operative day. Post operative day 9th, she presented in emergency room with abdominal pain, then CT scan was performed which showed thrombus involving superior mesenteric vein and portal vein. She was managed conservatively.

Conclusion: There is scarcity in published literature regarding this complication (portal vein and superior mesenteric vein thromboses) associated with laparoscopic colonic resections. As the world is moving towards more minimally invasive procedures, medical professionals will encounter unknown complications.

086-P

CLINICOPATHOLOGICAL BEHAVIOR AND TREATMENT RELATED OUTCOME OF RARE SALIVARY DUCT CARCINOMA

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Saman Qadeer; SKMCH & RC, Lahore, Pakistan

Background: Salivary gland tumors are rare salivary gland malignancies with resemblance to ductal breast carcinoma. We have described clinicopathological behavior and treatment outcomes of this rare malignancy.

Methods: Salivary duct carcinoma patients treated from 2010-2015 were retrospectively analyzed for clinico-pathological characteristics and treatment related outcomes of the disease.

Results: A total of twelve (12) patients with salivary duct carcinoma were included in the study. All were males with mean age of 52.58 ± 13.43 . Parotid gland was the most commonly involved major salivary gland while buccal mucosa and anterior tongue were most common oral cavity sub-sites involving minor salivary glands. The disease free survival was 75% at 10 months and 25% at 20 months. The median follow up time was 12 months. There were three local recurrences and one distant metastasis.

Conclusion: Salivary duct carcinoma is a locally aggressive tumor with tendency for local recurrence and distant metastasis. Adverse features such as peri-neural invasion, extra-capsular spread and advanced nodal disease may worsen prognosis.

087-P**DIAGNOSTIC VALUE OF ORAL CONTRAST STUDY FOR DETECTING ESOPHAGOGASTRIC ANASTOMOTIC LEAK AFTER ESOPHAGECTOMY.****JAVERIA ASHRAF, MOHAMMAD IJAZ ASHRAF, IRFAN UL ISLAM NASIR, SHAHID KHATTAK, AAMIR ALI SAYYED****SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, M A JOHAR TOWN , LAHORE. PAKISTAN**

Intorduction: After esophagectomy, oral aqueous contrast study is performed to detect the integrity of esophagastric anastomotic leak after esophagectomy. The aim of this study is to determine the clinical relevance of this radiological study for detecting leak.

Method: All patients who underwent esophagectomy either 3 stage or transhiatal between August 2015 to August 2016 were reviewed retrospectively on outcome of routine oral aqueous contrast study and appearance of anastomotic leak. All the data including type of surgery, contrast study performed on post-operative day, results of contrast study, diagnosis of leak either on contrast study, clinically or CT scan were recorded on a pre-formed data sheet. All the data was analysed on SPSS 20.

Result: Contrast study was done in 85 out of 89 patients on postoperative day 5. In 2 pateints, contrast study could not be interpreted by the radiologist. Total of 7 patients developed anasatamotic leak and in those 4 out of 7 patients, the leak had already manifested clinically before the routine contrast examination was planned. In remaining 3 patients with anastomotic leak, contrast study was negative and leak was detected later on clinical grounds or on CT findings.

Conclusion: Contrast study has no significant role in identifying esophagogastric leaks.

088-P

LONG TERM SURGICAL AND ONCOLOGICAL OUTCOME OF CARCINOMA BLADDER FOLLOWING RADICAL CYSTECTOMY: PROGNOSTIC FACTORS AND SURVIVAL ANALYSIS OF 134 PATIENTS OVER 10 YEARS FROM PAKISTAN

NOUMAN KHAN, ARSHED IRSHAD KHALIL, SHAUKAT FAIZ, SIDDIQUE ADNAN, AZFAR ALI, KHURRAM MIR

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Background Literature regarding long-term oncologic outcome of carcinoma bladder following radical cystectomy is deficient while clinical and pathological prognostic indicators are elusive, especially in the Pakistani population.

Objectives The aim of this study was to determine the long-term surgical and oncological outcome of carcinoma bladder and to determine the clinical and pathological indicators of long-term survival.

Methods & Materials: This is a retrospectively analysed data of 134 patients from to January 2007 to December 2017. We included all adult patients of bladder cancer who underwent radical cystectomy. Patients with salvage cystectomy and follow-up of less than 6 months were excluded. All patients were followed from the date of cystectomy until August 2018 or their death or loss to clinical follow-up. Clinical and pathological prognostic indicators were analysed using the ordinal regression method. Survival analysis was performed using life tables' method in SPSS.

Results Of the 134 patients, there were 85.8% males and 14.2% females. Median follow-up was 25 months while there was 03mortality (2.2%) in 30 days postoperatively. The 5-year recurrence-free survival was 56% while overall survival was 78%. The 5-year survival rate for organ confined disease was 90% while it was 51% for extravesical disease. Survival was significantly different between lymph node positive and negative disease (49% vs 82%) however it was not statistically significant ($p = 0.09$). There was no difference for survival rate of low and high grade tumors (83% vs 80%, $p = 0.624$). The 5-year survival for clinical stage was not significantly different. The pathological stage was the most significant predictor of death in bladder cancer patients after radical cystectomy.

Conclusion Radical cystectomy for bladder cancer has sound 5-year survival rates with lower early mortality or morbidity. Pathological stage is the most significant predictor of death in long-term.

Keywords: Carcinoma Bladder, Radical Cystectomy, Outcome

089-P

MANAGEMENT OF LOWER LIP ADENOCARCINOMA WITH METASTASIS TO MEDIASTINAL LYMPH NODES: A CASE REPORT

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Introduction: Lower lip adenocarcinoma with metastasis to distal locations has rarely been reported throughout literature. Here, we report an exceptional case of primary adenocarcinoma of the lower lip with suspicion of distal metastasis to the mediastinal lymph nodes.

Case presentation: A 45-year-old Pakistani male patient with a progressive pain, swelling, ulcerative lesion located on the left lower lip along with bleeding and pustular discharge. After computed tomography scans, biopsy and histopathology with immunohistochemical staining, we were able to confirm the diagnosis of primary adenocarcinoma of the lower lip. Nonetheless, there was enlargement of mediastinal lymph nodes which seemed to suggest distal metastasis.

Conclusion: This case is of exceptional because of its rarity, distinctive nature, plan of management and overall good surgical outcome.

Keywords: adenocarcinoma, lower lip, distal metastasis, mediastinal lymph nodes, surgical management

090-P

PRIMARY MALIGNANT MELANOMA IN THE BACKGROUND OF OVARIAN TERATOMA : A VERY RARE CASE REPORT**NAZISH KHALID****SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, M A JOHAR TOWN ,
LAHORE. PAKISTAN**

Introduction: Primary malignant melanoma of the ovary is a rare neoplasm. Malignant melanoma may originate from melanocytes in ovarian cystic teratomas (dermoid cysts). We present a case of primary malignant melanoma in the background of ovarian teratoma.

Case Discussion: A 33 year old female with no comorbidities presented with complain of abdominal pain and mass for 2 months. Surgery for biopsy i.e. right salphingo-opherectomy was performed which showed malignant melanoma in the background of cystic teratoma. Ultrasound was performed which showed focal hepatic lesion with omental caking and peritoneal disease. After discussion in MDT, it was decided to treat her with palliative chemotherapy. After completion of chemotherapy, she was again discussed in MDT, as it is rare disease which has better response to surgery. Surgery i.e. de-bulking surgery was planned. On laparoscopy, severe omento-peritoneal disease was seen. Surgery was abandoned because of un-resectable condition of disease. Patient was sent for palliative treatment. She is alive at present.

Conclusion: Malignant melanoma of ovary is an aggressive disease with high mortality rate. Due to rare occurrence of the disease, there is shortage of data with some published case reports. Knowledge is still deficient regarding the management of this disease. Our aim of the study is to enlighten the world about this rare disease and its progression. It will help the medical professionals in understanding primary malignant melanoma of ovary in background of ovarian teratoma.

Key Words: Malignant melanoma of ovary, ovarian teratoma.

091-P**Early Experience of Purse-String Versus Linear Conventional Skin Wound Closure of stoma.****MUHAMMAD ZUBAIR; LAHORE GENERAL HOSPITAL, LAHORE, PAKISTAN**

Purpose: Infection is one of the most frequent complications that can occur after stoma closure. The incidence of wound infection depends on the skin closure technique, but there is no agreement on the perfect closure method for an ileostomy wound. The aim of this study was to evaluate the incidence of infection and the patient's satisfaction in terms of cosmetics between purse-string closure (PSC) and the usual linear closure (LC) of a stoma wound.

Methods: This randomized clinical trial enrolled 52 patients who underwent a stoma closure from December 2017 to July 2018 in Surgical unit 1, Lahore General Hospital Lahore. Patients were divided into 2 groups according to the stoma closing method: the PSC group A (n = 27) and the LC group B (n = 25). The incidences of infection for the 2 groups were compared, and the patients' satisfaction, cosmetically and pain with the stoma were determined by using a questionnaire. POACS score was used to assess patient satisfaction.

Results: Infection occurred in 5 of 27 PSC patients (14.8%) and in 8 of 25 LC patients (32%), and this difference was statistically significant ($P < 0.03$). Patients in the PSC group were more satisfied with the resulting wound healing and its cosmetic appearance at one month (POSAS score 5 in grp A vs 6 Grp B, p value < 0.01) and 3 month (POSAS Score 2 vs 4 p value < 0.03) after surgery.

Conclusion: After stoma closure, PSC was associated with a lower incidence of wound infection and greater patient satisfaction (according to POSAS) compared to LC.

092-P

Clinical profile and outcome of Urachal Carcinoma at specialized cancer center

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Background & Objective: Urachal carcinoma is a rare and aggressive tumor that accounts for 0.34% of all bladder cancers. The aim of this study is to report our experience of management of urachal carcinoma.

Methods & Materials: Data of all the urachal carcinoma patients who were managed at shaukat khanum Memorial Cancer Hospital & Research Centre Lahore from January 2007 to December 2017 were reviewed retrospectively. Demographic and clinical information was retrieved from prospectively maintained hospital information system (HIS). After staging work up and URO MDC discussion, patients underwent partial cystectomy with or without pelvic lymphadenectomy. TNM classification (American Joint Commission on Cancer) was used for staging of urachal carcinoma. SPSS version 20 used for statistical analysis.

Results: A total of 04 patients (Male=03, Female=01) were included with mean age at diagnosis of 40.5 ± 7.1 years. Hematuria was the main complaint in all patients with a median duration of 8.0 months. Clinically all tumors were staged as T3 and 01 patient in addition had pelvic lymphadenopathy. Histologically all tumor were adenocarcinoma with subtype enteric (01 patient), signet ring cell (01 patient) and non specified (02 patients). 03 patients had moderately differentiated adenocarcinoma while 01 was poorly differentiated adenocarcinoma. Final pathological staging revealed pT3 in 03 patients while 01 patient had pT2a disease. Median follow up was 34.0 months (IQR14, 51). Recurrence was observed in 02 patients at 27 & 30 months of follow up. One of them had locoregional recurrence while other had metastatic disease with pulmonary mets. Chemotherapy was offered to both these patients while only one availed the treatment. Post chemotherapy patients failed to appear for follow up. 02 patients with no recurrence remain under regular follow up and are well.

Conclusion: Urachal adenocarcinomas are aggressive tumors and require multidisciplinary approach.

093-P

LARGE CELL NEUROENDOCRINE CARCINOMA OF CERVIX- A RARE AND DISTINCT CLINICOPATHOLOGICAL ENTITY**Nazish Khalid, Muhammad Faisal, Osama Shakeel, Tabinda Sadaf, Aamir Ali Syed
Shaukat Khanum Memorial Cancer Hospital & Research Centre**

Introduction: Large cell neuroendocrine carcinoma (LCNEC) is an uncommon histologic subtype of cervical cancer with a prevalence of approximately 0.087% to 0.9% (Wang et al., 2009), and is an extremely aggressive tumor with very poor prognosis. Knowledge of its distinct cytological and histological features is necessary for early diagnosis and provision of appropriate therapies. Multimodal treatments including surgery, chemotherapy and radiotherapy are needed. However, because of the low incidence, optimal therapy has yet to be determined, although neoadjuvant chemotherapy (NAC) appears useful as a therapeutic tool that may increase the resectability of these tumors. Recently, the efficacy of chemotherapy with irinotecan hydrochloride, a topoisomerase I inhibitor, and cisplatin against metastatic small cell lung cancer and cervical LCNEC after non-curative surgery was reported (Noda et al., 2002; Tanimoto et al., 2012). NAC with irinotecan plus nedaplatin was reported to be effective for bulky cervical squamous cell carcinoma (SCC) (Yamaguchi et al., 2012). These reports led us to select NAC with irinotecan plus cisplatin followed by radical hysterectomy for bulky tumor of cervical LCNEC. This report describes the clinicopathological features of a case of cervical LCNEC showing marked therapeutic efficacy with NAC using irinotecan plus cisplatin.

We are presenting a case of neuroendocrine carcinoma of cervix which was treated with induction chemotherapy followed by radiotherapy as a curative intent.

094-P

“SOLID PSEUDOPAPILLARY TUMOR OF PANCREAS - A SINGLE INSTITUTION EXPERIENCE”

Hassaan Bari; Shaukat Khanum Memorial Cancer Hospital & Research Centre, Lahore, Pakistan

Background; Solid pseudopapillary tumor (SPT) of Pancreas is a rare pancreatic tumor. Its true incidence in our population is not reported yet. Approximately 800 cases have been reported worldwide up till 2016. Due to scarcity of data no defined protocols for management of SPT of pancreas are available.

Objective; To review the presentation, diagnosis, surgical management and its outcomes for Solid pseudopapillary tumor of pancreas

Methodology; It is a retrospective case series. A pro forma was developed to retrieve the data (including age, gender, co-morbid, ASA level, CT-scan findings, type and duration of surgery, 30-days morbidity and mortality, hospital stay, histopathology report) from computerized medical record system of the hospital.

Study settings; Shauakat Khanum Memorial Cancer Hospital and Research Centre, Lahore.

Inclusion criteria; All patients with Solid pseudopapillary tumor (SPT) of pancreas diagnosed on histopathology and treated surgically at SKMCH & RC were included in this study.

Duration of study; from 1st January 2010 till 31ST December 2017.

Outcomes; A total of 11 patients were identified with SPT of pancreas within the study period. All patients were female with a mean age of 32 ± 13.5 year. Abdominal pain (91%) was the most common presenting symptom, followed by vomiting (27%). Six patients had pancreatic body and tail tumor, while rest of the five patients had tumor at head of pancreas. EUS and FNAC were done in 91% of patients, as part of routine preoperative workup. Mean tumor size on imaging was 7.5 ± 1.5 cm. Distal pancreatectomy was performed in six patients and spleen was preserved in two of them. Four patients underwent whipple's procedure and total pancreatectomy was performed in one patient (as the distal pancreas was atrophic in that patient, not suitable for anastomosis). Mean operative time was 5.2 ± 2.9 hours and mean blood loss was 300 ± 200 mls. No vascular encasement was found in any patient, however close abutment of tumor with portal and or superior mesenteric vein were observed in four patients. One patient developed postoperative bleed and one patient had grade B pancreatic fistula, both were managed conservatively. Overall hospital stay was 15 ± 13.8 days. There was no 30-day mortality. All the patients are on regular follow-up and none of the patient developed recurrent or metastatic disease.

Conclusion; In conclusion, SPT is a low grade tumor with good prognosis. The presence of a huge mass in the pancreas of young female should prompt suspicion for a SPT. Given its low malignant potential, and the presence of specific radiographic patterns, its diagnosis should be accurate. Surgical resection is curative and is possible in majority of the cases. A minimum 5-year follow-up after the surgical treatment is recommended.

095-P

INTRAOPERATIVE FROZEN SECTION OF SENTINAL LYMPH NODE BIOPSY IN UPFRONT BREAST CONSERVATION SURGERY: TIME TO “LET IT GO!!!”

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Introduction: Sentinel lymph node biopsy (SLNBx) is an established component of breast cancer surgery. Frozen section (FS) is routinely done at the time of surgery to confirm axillary metastasis and avoid unnecessary axillary lymph node dissection (ALND) in case of a negative axilla. Cost of one frozen section is 61 USD and it takes average of 30 minutes extra which further costs 70USD in the form of man power, equipment and longer duration of anesthesia.

Methods: A retrospective review was conducted at Shaukat Khanam Memorial Cancer Hospital Pakistan from Jan 2017 to Dec 2017 including patients treated for early stage breast cancer with clinically negative axilla. An institutional database was utilized for this purpose. SLNBx with FS was done in all patients and ALND was performed in positive SLNBx.

Results: A total of 240 patients were included in the study. All patients had an upfront breast conservation surgery (BCT) followed by adjuvant treatment. SLNBx biopsy was found to be negative in 209 (87%) patients while ALND was performed in only 5 (2%) patients. ALND was avoided in 26 (11%) patients as per Z- 11 Trial. The total cost of FS in patients where no ALND was required is 14,335 USD and the cost for extra time was 16,450 USD.

Conclusion: Frozen section can be safely omitted in patients who get adjuvant treatment to save considerable time and cost. ALND can be performed as a second operation if required post chemotherapy in such small percentage of patients.

096-P

REVIEW OF CASES OF OVARIAN MALIGNANCY MANAGED AT SPECIALIST SURGICAL UNIT: AN INSTITUTIONAL REVIEW

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Abstract: To describe the oncological outcome for patients with Ovarian Tumors who underwent surgical management regarding their clinical presentations, pathological features, prognosis and survival.

Methods: Patients were selected for inclusion in our study from our preexisting hospital cancer database. All patients who underwent surgical intervention for ovarian cancer between January 2010 and December 2015 were included in the study. Additional information from patients listed on the database was collected from the hospital electronic database and medical notes. Total no. of patients managed at surgical unit during this time period was 236. Patients who had upfront surgery, interval debulking surgery, completion surgery (Fertility Sparing & Not Fertility sparing) were recorded. Clinicopathological characteristics, Stage, Oncological outcome, follow-up duration and recurrence were reviewed. Data was analysed on IMB SPSS 20.

Results: Total number of Patients who had open surgery were 203 (86%), 33 (14%) had Laparoscopic surgery. Upfront surgery was done in 16 (6.8%) & Interval debulking surgery was carried out in 33 (14%) Fertility sparing completion surgery was done in 38(16.1%) & Not fertility sparing completion surgery was carried out in 148 (62.7%) NeoAdjuvant Chemotherapy was given in 119 (50.4%) & Adjuvant Chemotherapy was administered in 184 patients (78%). Among these patients histopathology types of ovarian carcinoma were as below;

Serous 132 (56 %), Endometrioid 34(14.4%)

Mucinous 22(9.3%), Granulosa 9 (3.8%), Dysgerminoma 8 (3.4%), Borderline Mucinous 8 (3.4%), Yolk Sac 4 (1.7%), Teratoma 2(0.8%), Mixed Germ cell 2 (0.8%), Brenner 1 (0.4%) & Sertoli Ledge cell 1 (0.4%) Recurrence was seen in 78 (33.1%). Persistent Disease was noted in 25 (10.6%). Disease free under surveillance are 128(54.2%). Alive with disease 41 (17.4%). Mortality 26 (11%), 41 were lost to follow up (17.4%)

Conclusion: Surgical management is the initial treatment of choice for ovarian cancer. For patients where optimal debulking surgery is not possible, the neoadjuvant chemotherapy is considered followed by interval debulking surgery and adjuvant chemotherapy. Ovarian tumors are considered difficult to treat and are associated with recurrence of disease.

097-P

RISK FACTORS FOR CHYLE LEAK AFTER ESOPHAGECTOMY, AN INSTITUTIONAL ANALYSIS**SHALLA ALI****SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE. PAKISTAN**

BACKGROUND: Chylothorax is an uncommon (3-8 % risk) but potentially fatal complication of esophagectomy with poorly understood risk factors. It has a high morbidity due to loss of fluids, electrolytes, and other nutrients, loss of lymphocytes and immune dysfunction.

METHODS: Retrospective chart review of adult patients who underwent esophagectomy between 2009 and 2016 was performed. Cases with chyle leak were identified according to a set criteria. Clinical features, operative findings and postoperative variables were recorded and predictors of chyle leak were analyzed.

RESULTS: During the study period, a total of 193 adult patients underwent esophagectomy of which 186 received neo adjuvant chemotherapy. The mean age was 53 years with 118 males and 74 females. Type of procedure performed was 3-stage esophagectomy in 98, Transhiatal esophagectomy in 79 and Ivor-Lewis esophagectomy in 15 patients.

Chyle leak was identified in 9 (4.6%) patients. There was no significant association of chyle leak with age, gender, co-morbid, level of tumor, Neo-adjuvant therapy and Type of esophagectomy. Chest drain output on postoperative day 5 was significantly predictive of chyle leak (p value<0.05). Drain output more than 1000 on day 4 was highly suggestive of chyle leak (p value<0.05). Day on which chest drain was removed was also found to be significantly related to chyle leak (p value <0.05).

CONCLUSION: No significant preoperative risk factors were identified for chyle leak. High chest drain output on postoperative day 5 and drain output more than 1000 on day 4 are significant predictors of chyle leak.

KEY WORDS: Thoracic duct, chylothorax, chylous ascites, chest drain.

098-P

STARTING A COLORECTAL SERVICE IN A PUBLIC SECTOR HOSPITAL IN LAHORE - OUR EXPERIENCE**ABDUL REHMAN , AWAIS AMJAD MALIK, ANWAR ZAIB, HAIDER ALI, MUHAMMAD FAROOQ AFZAL. SURGICAL UNIT 1, LAHORE GENERAL HOSPITAL.****ABSTRACT:**

Objective: To share our experience of colorectal service in a public sector hospital.

Methodology: All cases of colorectal surgery (benign and malignant) operated in surgical unit 1 LGH from Jan 2017 to Aug 2018 were included. Indication for surgery, mode of surgery and operative details were recorded. Post operative outcomes were also recorded.

Results: A total of 21 cases were operated in 18 months. 17 cases were malignant and 6 were benign. 5 cases of rectal cancer, 12 cases of colon cancer, 2 cases of ileocaecal tuberculosis and 2 cases of fecal fistula were reported. Procedures performed were right hemicolectomy in 10 cases, left hemicolectomy in 1 patient, left hemicolectomy with ileostomy in 1 patient, sigmoid colectomy in 2 patients, anterior resection in 2 patients, extra levator APR in 2 patient, a recurrent transverse colon tumor in 1 patient, diversion ileostomy in 1 patient and a recurrent rectal cancer in 1 patient. 9 cases were performed laparoscopically, 2 were converted from lap to open and 12 were performed open. 6 cases were performed in ER and 15 were performed in elective settings. All rectal cancer patients had received neoadjuvant chemoradiation. 2 splenic flexure tumor presented in ER and underwent open left hemicolectomy, and open left hemi-colectomy with ileostomy and mucus fistula formation all other colon cancers were performed in elective setting. 8 out of 21 cancer patients were discussed in the hospitals own tumor board meeting. 2 cases of post appendectomy fecal fistula were operated. 4 cases of ileocaecal tuberculosis were operated and right hemicolectomy was done.

Conclusion: A dedicated colorectal service has been started in a public sector hospital. It requires more dedication and support. Every case needs to be discussed in a tumor board meeting. Laparoscopy can be safely used as a main modality for colorectal surgery in a public sector hospital.

099-P

PATTERN OF MICROBIOLOGY CULTURES OF BILIARY STENTS IN PATIENTS UNDERGOING PANCREATICOUDODENECTOMY.**UMER FAROOQ1 , AWAIS AMJAD MALIK1, RIDA IMRAN1, HASSAN BARI1, ABDUL WAHID ANWER1, FAISAL HANIF 1****1 DEPARTMENT OF SURGICAL ONCOLOGY SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTER**

Abstract: Routine use of biliary drainage with stents before pancreaticoduodenectomy (PD) remains controversial. Stents have been shown to increase the rate of septic complications after surgery. This observational study assessed the patterns of bacterial cultures of stents retrieved during surgery, their sensitivities with commonly used antibiotics and also cultures of any wound or organ space infections. From the period of December 2014 to may 2018 a total of 161 patients were considered amenable for resection at Shaukat Khanum memorial cancer hospital and research center (SKMCH&RC) .Pre operative stenting was performed in 127 patients. 122 patients underwent PD whereas a de functioning bypass procedure was performed in 28 patients, while 11 patients were deemed unresectable. Out of these 122 patients who had PD, 98 patients were pre operatively stented. Stents were retrieved from 81 patients. Cultures of stents showed E.coli to be the most common bacteria (69.7%) followed by enterococcus (32.5%) and klebsiella (23.6%). 55.6% patients had poly microbial infection. Candida was isolated from a single patient while one patient had no growth of any microorganism on stent tip cultures. Antibiotics sensitivities showed that 57% cultures were sensitive to piperacillin/tazobactam group while 85.7% were sensitive to carbapenem group. Wound related complications were seen in around 45 % patients. Cultures from wounds showed concordance with the cultures obtained from stents in majority of the cases.

Conclusion: Patients who were stented preoperatively have high incidence of poly microbial postoperative infections. Combination of drugs can be used prophylactically in early postoperative period to counter varied spectrum of antibiotic sensitivities and resistance. Stents should be sent for cultures in all patients undergoing PD after pre operative biliary stenting. Wound cultures should be obtained.

Keywords: Pancreaticoduodenectomy, Preoperative biliary stenting, Whipple procedure

100-P

UPPER LIMB SALVAGE WITH FREE FIBULAR FLAP FOR SARCOMAS; EARLY RESULTS

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MIAN ABDULLAH ANWAR;
SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTER, LAHORE, PAKISTAN**

Abstract:-

Introduction: Development of new and effective chemotherapy regimens has made amputation an obsolete treatment for sarcomas. Resection and limb reconstruction with vascularized bone flaps has become a preferred option as it does not compromise long term survival in comparison to the patients treated with amputation. In this case series we determined the early outcomes of pediatric patients with bony sarcomas undergoing resection and upper limb salvage with free fibular flaps.

Patients and methods: Our inclusion criteria were primary bone cancer patients with no metastasis and no neurovascular involvement. All patients who met the criteria were included from Dec 2017 to date.

Results: In this study we analysed 4 patients who underwent upper limb salvage with free fibular flap for a primary bone cancer of the humerus between December 2017 and July 2018. All four had Ewing Sarcoma of the left humerus. The mean age was 6.5 years (6 to 7) and the mean follow up was 5.75 months (1 to 9). All patients underwent successful surgery. Median operative time was 460 min (400 to 560min). Early complications included one patient undergoing re-exploration for venous congestion and successful salvage of the fibular flap. One patient required peroperative repair of the lateral cutaneous nerve of the forearm. One patient had right foot drop with a limping walk and one patient has 10 degree extension lag of the left knee. Only two patients have radiographic evidence of graft union due to short follow up.

Conclusion: Upper limb salvage with free fibular flap is a better treatment modality compared to traditional choice of amputation with an acceptable practical and cosmetic outcome. Preserving the growth of the arm and hand function makes a big difference in the life of a growing child. However it is necessary to have a longer follow up period in order to determine the success of this procedure in terms of graft integrity, recurrence and use of the arm in adulthood.

101-P

A STUDY OF PERINEURAL INVASION IN ORAL SQUAMOUS CELL CARCINOMA**ZUBAIR DURRANI****ORAL AND MAXILLOFACIAL SURGERY DEPARTMENT, REHMAN MEDICAL INSTITUTE, PESHAWAR, PAKISTAN**

Aim of The Study: To measure the frequency of Perineural invasion in oral squamous cell carcinoma; to correlate its presence with various variables; and to assess its impact on prognosis.

Methodology: A retrospective Analytical study was planned. Patients were identified with oral squamous cell carcinoma that had underwent surgical excision over the past 7 years in Rehman Medical Institute. Pathology reports were collected; and based upon the presence or absence of PNI, patients were divided in to two groups. The group with PNI were analyzed for a set of associations and then compared with other group for comparison. PNI frequency was correlated with age, gender; site, size and differentiation of tumor. Presence of PNI, number of tumor foci along the perineural region and the size of the nerve involved were then correlated with presence or absence of nodal disease and frequency of recurrence in these cases. Results were compiled and statistically analyzed using chi square test.

Results: Total number of patients included in study was 59. PNI was found present in 13 (22.03%) patients. PNI was found mainly in middle age group, Gender distribution: male-7, female-6; Site distribution: tongue carcinoma-6, other sites-7; Size: T3-10, T1-3; Differentiation: well differentiated-10, moderate differentiated-3. (All associations Insignificant)

Association of nodal status with PNI found positive in 6 patients (pN2b-6, pN0-1) (Significant); Association of recurrence with PNI was also found positive in 6 patients (Significant).

Number of foci of perineural invasions (1 focus- 7, 11 foci -1, 3 foci -3, 4 foci – 1, 5 foci – 1) association with recurrence (6 cases) and lymph node metastasis (6 cases) (Insignificant); Nerve size involved by PNI (<1 mm – 3, > 1mm – 10) association with either lymph node metastasis (6) or recurrence in the neck (6) (Insignificant).

102-P

REVERSAL OF HARTMANN'S PROCEDURE

**MUHAMMAD IJAZ ASHRAF, AWAIS AMJAD MALIK, IRFAN-UL-ISLAM RAZA SAYYED, SHAHID KHATTAK, AAMIR ALI SYED.
SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTER, LAHORE, PAKISTAN**

Introduction: Hartmann's procedure is normally performed for left sided colonic pathologies in emergency situations. Restoration of intestinal continuity after Hartmann's procedure has traditionally been viewed to be technically demanding and associated with significant morbidity and mortality. This study has been done to show reversal rate after Hartmann's procedure in an Asian population.

Methods: Data collected from database showed that 105 patients had undergone Hartmann's procedure from Jan, 2006 to Dec, 2015 due to colorectal carcinoma. Patients who subsequently underwent Hartmann's reversal were identified and their records reviewed retrospectively.

Results: Hartmann's procedure was done under emergency situation in 81 patients either due obstruction (65.1%), perforation (9.4%) and anastomotic leak (1.9%) . It is done electively in 25 patients mostly due to poor bowel preparation secondary to stenosing nature of tumor. Hartmann's reversal was done in 56 (52.8%) patients. The reversal was not offered in remaining patients either due to disease recurrence (36.7 %), metastasis (26.5%), lost of follow up (28.5%) or others (8.1%).The median interval between resection and reversal was 32 weeks.

Conclusion: In our population, Hartmann's procedure is more commonly performed for colorectal cancer under emergency situations. Reversal rate is 52.8% and the most common reasons for not reversing the disease are either locoregional recurrence or distant metastasis.

103-P

MANAGEMENT OF ONCOLOGICAL PATIENTS IN A SURGICAL WARD OF A PUBLIC SECTOR HOSPITAL OUR EXPERIENCE OF CANCER PATIENTS IN A TERTIARY CARE HOSPITAL OF LAHORE

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Introduction: A lot of patients with the diagnosis of some kind of malignancy present to the General surgery Department because there is no separate department of surgical oncology in Government setting, tertiary care hospitals. Moreover no record keeping system of our tumor patients was previously present. In order to find out the tumor burden & improve the surgical management of these patients we have formed a Cancer registry and we would like to share our experience with the rest of the doctor's community.

Methods: All patients admitted in Surgical Unit 1 of Lahore General Hospital, Lahore from 1st January 2017 to 15th September, 2017 with the diagnosis of malignancy, irrespective of age, were included in the study.

Results: There were a total of 51 patients admitted with the diagnosis of malignancy. 31 (61%) Males & 20 (39%) Females were included in the study. Most of the patients belonged to peripheries of Lahore. A total of 20 patients were discussed in Morbidity and Mortality Meeting. 31 (61%) Underwent some kind of surgical procedure. Among them 6 (19%) patients had undergone whipples procedure, 3 (9%) hepatico-jejunostomies, 3 (9%) Underwent hemicolectomies (2 laparoscopic & 1 open), 6 (19%) patients underwent modified radical mastectomies, 1 (3%) extra-levator APR, 2 (6%) adrenalectomies, 3 (9%) thyroidectomies, 3 (9%) parotidectomies, 1 (3%) modified radical neck dissection, 1 (3%) exploratory laprotomy & loop colostomy, 1 (3%) laparoscopic removal of retroperitoneal mass, 2 (6%) orchidectomies. 5 Patients expired during hospital stay, 1 (20%) after Extra Levator APR & 1(20%) post whipple, rest of the patients didn't undergo any surgical procedure. There were 4 (12%) Patients who had received Neo-adjuvant, 5(16%) females who underwent MRM & 2 (6%) males who underwent orchidectomies were referred for Adjuvant to INMOL Hospital, Lahore.

Conclusion: Although it's just a start but we want to extend our cancer registry program to the whole Hospital. This would help us to identify the issues being faced by a tertiary care hospital in dealing with the cancer patients.

104-P

Gastrointestinal Stromal Tumors: 10 Years Experience from a Tertiary Care Hospital.

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SHAHID KHATTAK, AAMIR ALI SYED.
SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTER, LAHORE, PAKISTAN

Background: Gastrointestinal stromal tumors (GISTs) are a rare mesenchymal tumors with wide variations in presentations and organ involvement. Surgery remains the curative treatment option for resectable tumors. Targeted therapy has improved the outcomes in terms of down-staging the disease and increasing overall survival.

Objective: To determine the demographic properties, clinical characteristics and the outcomes of surgery for GISTs in terms of survival.

Methodology: We retrospectively analyzed all the patients (n=171) who presented to our hospital from January 2007 to December 2016 with the diagnosis of GIST. Surgery was performed in 130 patients whereas 40 didn't undergo surgery. Demographics, symptoms, organ involvement, imaging details and surgical outcomes were recorded. Patients who were not operated were excluded.

Results: Total of 130 patients was analyzed, in which males were 57.6%(n=74) and females were 41.2%(n=56) with median age of presentation of 51.07 + 13.07. Most of the patients were from Punjab 54%(n=70) followed by Khyber Pakhtoon Khuwa 28%(n=36). Abdominal pain was the most common presenting symptom found in 67%(n=87) patients. Neoadjuvant imatinib was given in 27.6 %(n=35) patients.. Open surgery was the most common mode of surgery 104(80%) and laparoscopic surgery was performed in 20(17%) patients and rest were laparoscopic converted to open 6(4.6%). Most common GIST type was spindle cell 65.3%(n=84) Most common organ involved with GIST was stomach 34.7%(n=45), followed by Jejunum 9.5%(n=13). 20%(n=34) patients had recurrence post surgery. Overall 5-year survival at the end of 5 years is more than 80%.

Conclusion: GIST has variable presentation and organ involvement with most common being Stomach. It presents with abdominal pain, vomiting or mass. Outcome is effected by presence of high risk features: Size of tumor > 5 cm or > 10mitosis / 50 HPF .

105-P

EXTENDING ACOSOG Z0011 TO ENCOMPASS MASTECTOMY PATIENTS: A RETROSPECTIVE REVIEW**RUQAYYA NAHEED KHAN; SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTER, LAHORE, PAKISTAN**

Introduction: Axillary nodal status in breast cancer patients is a paramount prognosticator, next to primary tumor size and grade. It has been well established that patients with negative sentinel lymph node biopsy can safely avoid axillary lymph node dissection. A positive sentinel lymph node has traditionally required subsequent axillary dissection. The ACOSOG Z11 trial of sentinel lymph node positive patients undergoing breast-conserving surgery found no difference in Overall Survival (OS) and Disease Free Survival (DFS) in those patients who underwent subsequent Axillary Lymph Node Dissection (ALND) vs. observation. The Z11 trial excluded patients who underwent mastectomies. The purpose of this study is to determine whether Z0011 can be applied to mastectomy patients as well in 1-3 positive sentinel lymph nodes and avoid unnecessary ALND.

Methods: A retrospective review was conducted at Shaukat Khanam Memorial Cancer Hospital Pakistan from Jan 2015 to Dec 2017 including patients who were treated for invasive breast cancer and required upfront mastectomy. They were clinically node negative so sentinel lymph node biopsy was performed. Patients underwent ALND with positive sentinel lymph node. A total of 156 breast cancer patients with mastectomies were reviewed.

Results: 95% of the patients were female while 3% were male. Average age was 44 years. There was no difference in race, comorbidities, histology, T stage, N stage, overall stage, use of adjuvant chemotherapy and radiation therapy. 64 patients underwent ALND for positive lymph node while 92 patients were spared of axillary dissection due to negative SLNBx. Out of 64 patients 38 patients (59%) had only 1 lymph node positive which was the sentinel node. 18 patients (28%) had 2 lymph nodes positive including the sentinel node while only 8 patients (13%) had 3 or more positive nodes.

Conclusion: Keeping in mind the complications related to ALND; above results clearly show that ALND could have been avoided in 87% of patients in the setting of adjuvant radiation, possibly avoiding the morbidity associated with axillary lymphadenectomy although a prospective randomized trial needs to confirm these results.

106-P

OUTCOMES OF POSTERIOR PELVIC EXENTERATION AT A SPECIALIST ONCOLOGICAL CENTRE

SHALLA ALI; SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTER, LAHORE, PAKISTAN

Introduction: In total pelvic exenteration all the organs in the pelvic cavity are removed with the disease organ. Urinary and fecal continence is provided by ostomies. After the first description of this type of operation, many modifications of the technique for the pelvic exenteration are described. The main aims of these modifications are to have urinary and anal continence. Posterior pelvic exenteration is one of these modifications the restoration of the bowel continuity and fecal continence is main objectives in modified posterior pelvic exenteration operations. Posterior pelvic exenteration provides an option for optimal local control for patients with locally advanced or recurrent gynecologic or rectal malignancies. The morbidity and mortality of this radical operation has improved with evolution of surgical techniques and perioperative care. We report our experience of posterior pelvic exenteration at a specialist cancer hospital.

Methods & Study design: All patients undergoing posterior pelvic exenteration between 2002 uptill April 2018 were studied. This is retrospective study .Clinical details, operative, postoperative and follow-up data were recorded from electronic case records and analyzed using IBM SPSS Ver 20.

Results: This is a retrospective study over the 15 year period (2002 uptill April 2018), we identified 40 female patients who underwent posterior pelvic exenteration. The median age was 50.50 years. Primary tumor was Ovarian in 34(85%) patients rectal in 6 (15%) patients. Exenteration was performed for recurrent disease in 29 (72.5%) patients. Median operative time was 258.3 minutes. Three patients developed postoperative complications (Anastomotic leak, Pulmonary Embolism, Ureteric injury in one patient each). Median hospital stay was 7 days. Over a median follow-up duration of 46.88 months, 22 patients are under surveillance, out of these 16 (40%) are alive and disease free, 4 are alive with disease (10%), 6 had died of disease (6%) while 1 (2.5%) patients died from other causes. 11 (27.5%) patients were lost to follow up.

Conclusion: Posterior pelvic exenteration can help in achieving local control in locally advanced or recurrent rectal or gynecological cancers. A multidisciplinary team approach to the management of these aggressive tumors is required for optimal disease control.

107-P

RARE PRESENTATION OF A GIANT RECURRENT LIPOMA OF NECK & AXILLARY ORIGIN

DR .UZAIR RASHID,LAHORE GENERAL HOSPITAL, DR. HUMERA RAFIQUE, LAHORE GENERAL HOSPITAL, PROF. DR. FAROOQ AFZAL, LAHORE GENERAL HOSPITAL DR. AWAIS AMJAD MALIK, LAHORE GENERAL HOSPITAL, DR. ADEEL KAISER, LAHORE GENERAL HOSPITAL

Abstract:-

Case Discussion: Lipoma is the most common neoplasm of mesenchymal origin. Only 13% of them arise in head and neck and that too in subcutaneous posterior neck region mostly. We describe a case of a 23 year old female who presented with a recurrent giant lipoma presenting in the anterior neck region and passing through the thoracic inlet towards the axilla. Diagnoses of these lesions in these rare locations are important so that the surgeon resects them completely. Lipomas tend to recur when they are not widely resected in any location. These lesions can rapidly enlarge and rarely infiltrate local tissues and require wide resection with an attempt of preservation of vital structures.

108-P

POST MASTECTOMY IRRADIATED WOUNDS: A CHALLENGE FOR THE OPERATING SURGEONS. OUR EXPERIENCE OF 3 CASES.

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SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL & RESEARCH CENTER

Background: Radiation exposure as a result of radiation treatment, causes serious problems such as skin breakdown, fibrosis, or intractable wounds, recurrent infections. The effect of radiation often extends further than is apparent. The management of these non-healing wounds is lengthy and difficult.

Objective: To share our experience of successful management of 4 cases of post mastectomy post radiation wounds.

Case 1: 49 year old female known case of right ca breast treated by MRM in May 15, completed radiation in Jul 15. Developed skin breakdown in Oct 2016. She underwent excision of wound and reconstruction with a subscapular flap in July 2017. Biopsy showed no evidence of tumor recurrence. She had wound dehiscence of donor site. This was subsequently successfully managed with VAC application followed by delayed primary closure. Patient remains well with a healthy wound till her last follow-up.

Case 2: 58 year old female known case of left ca breast treated by MRM in Apr 17, completed radiation in Sep 17. Developed wound dehiscence while receiving XRT. Wound biopsy was done which showed tumor recurrence. She underwent excision of recurrent tumor and reconstruction with a latissimus dorsi flap in May 2018. Patient remains well with a healthy wound till her last follow-up.

Case 3: 50 year old female known case of right ca breast treated by MRM in 1998. Completed radiation in Nov 1998. She developed an unstable scar after 4 years of treatment. Was managed conservatively. Was lost to follow-up in the interim. Presented again in 2008 with recurrence on the other side which was managed with BCS. She was seen by plastic surgery services in Mar 2018 for non healing wound on the right mastectomy site. Wound biopsy revealed no evidence of tumor recurrence. She underwent excision of non healing scar with healthy margins and reconstruction was done with a latissimus dorsi flap in May 2018. Patient remains well with a healthy wound till her last follow-up.

Case 4: 48 year old female known case of left ca breast treated by MRM in Mar 16, completed radiation in Aug 16. Developed non healing wound post XRT. Wound biopsy was done which didn't show recurrence. She underwent excision of scar and reconstruction with a scapular flap in Apr 2018. Patient remains well with a healthy wound till her last follow-up.

Conclusion: Post-mastectomy irradiated wounds are often difficult to treat. Wide excision of scar to normal margins, and flap coverage provide a robust solution to the reconstruction of these difficult wounds.

109-P

PARADIGM SHIFT IN SURGICAL TREATMENT OF COLORECTAL LIVER METASTASIS : PUSHING THE LIMITS

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Colorectal cancer (CRC) is the third-most common type of malignancy and fourth-most frequent cause of cancer-related mortality worldwide. Approximately fifty percent of colorectal cancer patients will eventually develop liver metastases and this will ultimately result in death for more than two thirds of the patients. Although radical surgery is the standard treatment modality, only around 20% of patients are deemed eligible for resection. The goal of surgery in colorectal liver metastasis is to resect all metastases with negative histological margins while preserving sufficient functional.

Hepatic parenchyma. There has been a paradigm shift in surgical treatment of colorectal liver metastasis. Earlier indications of liver resections were maximum 4 metastasis in single lobe of liver without extra hepatic disease. However in the recent era the only contraindication inability to achieve R0 resection and unable to preserve sufficient functional residual liver volume after resection. Multidisciplinary team decision-making, evolving chemotherapy agents, advances in hepatic surgical technique, interventional therapies, improved perioperative care patient care are contributed to improve 5-year OS rates from <8% to 25-40% and newer data is coming up to suggest a further increase in overall survival. Moreover, neoadjuvant treatment, which is used for local tumour amelioration, has a high response rate (>50%) and can increase the rate of resectability from 10 to 30%. Advances in hepatic surgical technique, perioperative care and improvements in patient selection criteria were able to increase the number of patients who could undergo major or extended hepatectomy with curative intent. Patients with bilateral CRLM may be candidates for one-stage multiple segmentectomies; two-stage resection with or without portal vein/Hepatic vein embolization which may allow complete resection in patients with more advanced disease which was once considered palliative patients only with poor overall outcomes. We present a brief overview of the historic background of liver surgery and recent advances in surgical and international techniques which have made a striking difference in overall survival of these patients.

Keywords: Colorectal cancer, liver metastasis, chemotherapy, ablation

110-P**TITLE: PREDICTORS OF PRIMARY CYTOREDUCTIVE SURGICAL OUTCOME IN PATIENTS WITH ADVANCED OVARIAN CARCINOMA.****BUSHRA KHAN; AGHA KHAN UNIVERSITY HOSPITAL, KARACHI, PAKISTAN**

Objective: The objective of this study is to identify pre-operative clinical and radiological predictors of sub optimal cytoreduction in patients with advanced ovarian carcinoma.

Material and Methods: We retrospectively reviewed clinical features, preoperative CT scans findings and operative findings from patients with advanced epithelial ovarian cancer who underwent primary cytoreduction between 2014 and 2016. Fifteen criteria were assessed. Clinical data were extracted from medical records. Optimal cytoreduction was defined as Nil residual disease.

Results: We retrospectively identified 33 patients who met the study inclusion criteria. The rate of optimal cytoreduction (nil residual disease) was 39%. On preoperative CT scans, diffuse peritoneal thickening was the only predictor of suboptimal cytoreduction on univariate analysis ($p = 0.005$).

Conclusion: Diffuse peritoneal thickening in preoperative CT scans is considered predictive of suboptimal cytoreduction. These patients may be more appropriately treated with neoadjuvant chemotherapy followed by surgical cytoreduction.

111-P**LACK OF AWARENESS AMONG SURGEONS REGARDING SAFE USE OF ELECTROSURGERY. A CROSS SECTIONAL SURVEY.**

Presenting Author: Hashim Hussnain Hashim Hussnain, Awais Amjad Malik, Romaisa Shamim, Ruqayya Khan, Anam Fatima, Shahid Khattak, Amir Ali Syed, Muhammad Farooq Afzal.
Department of Surgery, SKMCH&RC, Lahore.

Objective: To assess the fundamental knowledge on the safe use of electrocautery among surgeons at our institute.

Methodology: A questionnaire was prepared and distributed among all the surgeons and residents at 2 institutes which tested their knowledge and understanding on the safe use of electrosurgical devices. A total of 18 consultants, 12 fellows and 20 residents were tested. For the sake of anonymity no information was obtained regarding the level of training and experience on the proformas. Total 12 questions were asked and an expert level was set at 10/12. Moderate level at above 6 and below that was considered as unsafe.

Results: A total of 50 participants completed the questionnaire. Only 6 had an expert level of understanding. 16 had moderate understanding and 28 were considered unsafe regarding use of electrosurgical devices. 85% participants were not aware of that electrosurgery relies on AC current for usage. 66% participants weren't aware of the correct placement of dispersive electrode. 85% participants weren't aware of the correct mode of current to use for coagulating vessels. 50% of surgeons would cut a dispersive electrode to fit it on a child. 60% participants were unaware of the need for double gloving while using electrocautery. 60% of surgeons didn't know how to handle an operating room fire. 50% participants weren't aware how to protect themselves from the hazardous OR smoke. **Conclusion:** There is lack of understanding on how electrocautery works and how to use it safely. There is a need to arrange hands on workshops and lectures to increase awareness of this item which is a necessary part of a surgeons practice.

112-P**OBESITY AND MALE GENDER AS RISK FACTORS FOR CONVERSION IN LAPAROSCOPIC RECTAL SURGERY.****Presenting Author: Hashim Hussnain**

Authors details: Hashim Hussnain, Awais A Malik, Irfan-ul-Islam Nasir, Namra Urooj, Muhammad Ijaz, Shahid Khattak, Aamir A Syed, Shaukat Khanum Memorial Cancer Hospital & Research Center

Objective: To evaluate the risk factors for conversion from laparoscopic to open resections in a tertiary care cancer hospital.

Methods: All patients with a diagnosis of rectal cancer from Jun 2006 to Jun 2015 were studied. Patient demographics were recorded. All patients who underwent laparoscopic resections were studied. Reasons for conversion were noted for each patient.

Results: A total of 440 surgeries were performed for rectal cancer. 262 were laparoscopic and 178 were open. There were 27 conversions (10%). Male gender was the most common risk factor (OR 2.1). Advanced tumor was responsible for conversion in 10 patients (OR 1.7). Obesity was a risk factor in 16 patients (OR 1.6). Lower tumor were more likely to be converted. APR had more conversion (OR 1.4). Converted patients more complications than laparoscopic group (laparoscopic: 5.7 %; vs. converted: 8.2 % vs. open: 8.4 %) and a longer mean hospital stay (laparoscopic: 7.2 days; vs. converted: 9.1 days; vs. open: 8.2 days).

Conclusion: Male gender, obesity, advanced tumors and abdominoperineal resections are a strong risk factor for conversion from lap to open resection in rectal cancer.

113-P

RECTAL CANCER SURGERY; LAPAROSCOPIC OR OPEN. RESULTS FROM A TERTIARY CARE CANCER HOSPITAL.**AUTHORS DETAILS: NAMRA UROOJ, AWAIS A MALIK, HASHIM HUSSNAIN, IRFAN-UL-ISLAM NASIR, MUHAMMAD IJAZ, SHAHID KHATTAK, AAMIR A SYED, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL & RESEARCH CENTER.**

Objective: To measure the short and long term surgical outcomes of laparoscopic rectal cancer surgery at a cancer hospital in a lower middle income country.

Methods: All patients with a diagnosis of rectal cancer from Jun 2006 to Jun 2015 were studied. Patient demographics were recorded. Short term surgical outcomes were recorded. Oncological factors indicating an adequate surgical resection were identified. Successful resection was defined as having negative linear and radial margins and a complete TME. LN yield was also recorded. Post op complications were also compared.

Results: A total of 440 surgeries were performed. 154 abdominoperineal resections, 35 extra levator abdominoperineal resections, 151 anterior resections, 40 ultralow resections, 40 hartman's procedures and 20 total colectomies were performed. 262 were laparoscopic and 178 were open. There were 27 conversions (10%). Tumours in the open group were more aggressive and more advanced. There were more T4 lesions (5.2% vs 0.6%), more mucinous (38.7 vs 26.7%) and more nodal involvement (45% vs 34%). Distal resection margins were negative in all open and laparoscopic resections. CRM was clear in 83.9% in open resections vs 88.8 % in laparoscopic resections. TME was complete in 86% in open surgery and 91% in laparoscopic surgery. Median number of LNs excised were similar in both groups (median of 13). Complications were seen in 8.4% patients in open group versus 5.7% patients in laparoscopic group.

Conclusion: Laparoscopic surgery is similar to open surgery in terms of early surgical and oncological outcomes. A long term comparison of oncological outcomes in terms of recurrence and survival is required.

114-P

CLINICAL RELEVANCE OF AXILLARY LYMPH NODE DISSECTION IN CYTOLOGY PROVEN LYMPH NODE POSITIVE AXILLA AFTER NEO ADJUVANT SYSTEMIC THERAPY

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HUMA MANNAN ; SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL & RESEARCH CENTER

Introduction: Neo adjuvant chemotherapy has become the standard of care in locally advanced breast cancer and lymph node positive axilla. It reduces the size of breast tumor and hence more breast conservation (BCT) than mastectomy. This favorable outcome raises the controversy in managing axilla of node positive patients who receive neo adjuvant therapy (NAC) to avoid unnecessary axillary lymph node dissection (ALND).

Methods: A retrospective review was conducted at Shaukat Khanam Memorial Cancer Hospital Pakistan from Jan 2017 to Dec 2017 including patients who were treated for invasive breast cancer and had cytology proven positive lymph nodes. Neo adjuvant chemotherapy was offered to all followed by BCT and ALND. Total of 210 patients were included in the study.

RESULTS: All the patients were female. Average age was 44 years. After NAC complete nodal response was seen in 95 (45%) patients. 34 (16%) patients had only single lymph node positive while the remaining 39% of patients had partial response to NAC with two or more positive LNs.

Conclusion: Keeping in mind the complications related to ALND, above results clearly show that ALND could have been avoided in 61% of patients. We propose placing a clip in the single suspicious lymph node in axilla and excising it along with a sentinel lymph node biopsy and frozen section post chemotherapy.

115-P

PEDIATRIC ONCOLOGY PATIENT OUTCOMES IN A DEVELOPING COUNTRY INTENSIVE CARE UNIT

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Background: Cancer is not a common but an important cause of pediatric morbidity and mortality in the developing world. With improved treatment regimens survival rates are higher. However these chemotherapeutic regimens can also lead to complications requiring transfer to an intensive care unit (ICU).¹ Here we report our experience of reasons for critically ill pediatric oncology patients needing an ICU transfer and their outcomes.²

Methods: A retrospective cohort study was conducted from December 2015 to June 2017. After IRB approval pediatric oncology patient medical records with ICU admissions were reviewed for data regarding demographics, diagnosis, disease stage, pediatric risk of mortality (PRISM) III score and therapeutic interventions.

Results: Sixty patient medical records with 66 ICU admissions were reviewed with 36 (60%) boys and 24 (40%) girls. The median age was 4 years (range: 1 to 17). Both Precursor-B-acute leukemia 17 (28.3%) and mature B-cell lymphoma 15 (25%) were the most common diagnosis seen followed by Wilm's tumor 10 (16.7%). The mean PRISM-III score among survivors was lower 8.6 +/- 4.3 than that seen in the non-survivors 16.2 +/- 9.7 (p<0.0001). Overall 27 patients (45%) died. The mortality rate was 57.6 % (n=19) in patients with PRISM III of > 10 during an ICU admission as compared to 24.2% (n=8) in patients with a score of <= 10.

Conclusions: The mortality rate for pediatric oncology patients admitted to the ICU in developing countries is higher than that seen in developed countries. Mortality was significantly related to a high PRISM-III score on admission to the ICU.

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116-P

“PERCEPTIONS AND BARRIERS IN IMPLEMENTATION OF WORLD HEALTH ORGANIZATION (WHO) SURGICAL SAFETY CHECK LIST AMONG HEALTH CARE PROFESSIONALS AT SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL & RESEARCH CENTER”.

**(FOZIA ALI, OSAMA SHAKEEL, IRFAN UL ISLAM NASIR , ABDUL WAHID ANWER , AHSAN WAQAR KHAN , SHAHID KHATTAK , AAMIR ALI SYED)
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Abstract

Introduction: The World Health Organization (WHO) has implemented the Surgical Safety Checklist (SSCL) as part of the Safe Surgery Saves Lives campaign to improve surgical safety worldwide. It has been shown to decrease mortality and complications and has been adapted worldwide. Regardless of benefits of the SSCL, compliance and acceptance in many areas remain poor. System flaws and human errors persist. Identifying provider perspectives of patient safety initiatives may identify strategies for improvement.

Purpose/Objectives: To investigate perceptions of Operating Room (OR) staff regarding the WHO Surgical Safety checklist. To identify reasons and barriers for poor compliance and implementation.

Material/Methods: Questionnaires (Performa) were handed out to OR teams across all surgical disciplines, Anesthesia team, Nurses and Technicians at SKMCH&RC, over a 4-week period in July 2018.

Results: Questionnaires were distributed to all the disciplines working in the operating room. The participant response rate was Nursing staff 63%, Anesthesia team 25% and Surgeons 10%. The compliance rate of SSCL is 100%. The majority 95% of respondents perceived the SSCL as a tool to improve safety, prevent errors and reduce mortality. 92% said that it is improving the team work and 87% thought SSCL ensures patient safety. However, barriers were identified, time-related issues and lack of cooperation from team members. Significantly 38% respondents did not have orientation and training to use the SSCL.

Conclusion: The barriers in our setting are similar to those identified else where. There is a need for better training in the use of the SSCL, including adaptation of the checklist to make it fit for purpose in our setting. Improving use of the checklist will allow OR staff to work together towards ensuring a safer theatre environment for both patients and staff.

117-P**SHORT TERM SURGICAL OUTCOMES OF PATIENTS AFTER LIVER RESECTION****AUTHORS :** NAMRA UROOJ, AWAIS AMJAD MALIK, RAZA HUSSNAIN, MUHAMMAD IJAZ ASHRAF, HASSAN BARI, ABID QUDDUS QAZI ,ASIM YOUSAF, SHAHID KHATTAK, , AAMIR ALI SYED, FAISAL HANIF**INSTITUTION:** DEPARTMENT OF SURGICAL ONCOLOGY, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE**Abstract:****Objective:** To present the demographics and early outcomes of patients with primary and secondary liver tumours managed at SKMCH.**Methodology:** Between September 2014 and July 2018, all patients undergoing liver resections were included. Basic demographic, clinical, operative and follow-up data was recorded.**Results:** A total of 85 liver resections were performed. Median age was 52 with 48 males and 37 females. The common indications were hepatoblastoma, hepatocellular carcinoma, Gall bladder carcinoma and liver metastasis. Median operative time for the patients were 378 min (165 – 720 min), Median blood loss was 424 mls (Range 30 – 1200 mls). Median ICU stay of the patients was 36 hrs (0-144hrs). Median hospital stay was 8 days (Range 4-10). There were no reoperations or operative mortality. 6 patients had pulmonary complications, 3 developed a perihepatic hematoma, 2 patients had an MI, 2 had a surgical site infection ,2 patients developed small for size syndrome and 1 developed acute renal failure .**Conclusion:** Surgical outcomes of hepatobiliary malignancies can be significantly improved by following a multidisciplinary approach in addition to advanced diagnostic, therapeutic and technical expertise. A specialist hepatobiliary service can help to improve the overall surgical outcomes of these patients by giving them a better chance to fight their potentially curable disease.

118-P**LIVER TRANSPLANTATION FOR HEPATOCELLULAR CARCINOMA AT SOUTHWEST LIVER UNIT, UK****HAFIZ HAMAD ASHRAF 1, KATIE RAMOS 2, LOUISA VINE 3, DAVID SHERIDAN 4, MATTHEW CRAMP 5
HAFIZ HAMAD ASHRAF; UNIVERSITY HOSPITAL PLYMOUTH,UK****Introduction:**

Hepatocellular carcinoma (HCC) is a frequent cause of death in patients with liver Cirrhosis. (1) With high specificity, CT & MRI have eliminated the need for histological diagnosis of HCC. (2) Liver transplant is a potentially curative treatment option for hepatocellular carcinoma in carefully selected individuals with cirrhosis of liver. (3) Milan Criteria is widely used to select cirrhotic patients who will benefit from liver transplant; the UK criteria are an expansion of the Milan criteria that go beyond Milan and University of California, San Francisco (UCSF) criteria. (4)

Objectives:

A review of liver transplant service for HCC was carried out in the setting a service evaluation/clinical audit to see how best our practice correlates to UK criteria.

Methods:

Patients receiving liver transplant with the indication of HCC from southwest liver unit between 2010 and 2016 were identified from the unit's database. Electronic and paper clinical record was reviewed and data collected for HCC related parameters listed in the Organ Donation & Transplant (ODT) Policy Pol 195/6 "Liver Transplantation: Selection criteria and recipient registration." (5)

Results:

100% patients received dual modality for radiological diagnosis of HCC. No patient had AFP more than 1000 among AFP secretors, and No patient with tumour rupture or distant metastasis was listed. 97% listed patients were within criteria on most recent imaging prior to transplant. 54% patients received loco-regional bridging therapy. Review of explant histology confirmed liver cirrhosis in 100%, confirmed HCC in 94% and no patient had macrovascular invasion. Extra lesion more than 1cm was seen in 23% explants. 14% patients would be out of criteria if imaging was performed at the time of transplant and was 100% accurate.

Conclusions:

The practice at southwest liver unit appear to follow the national policy in relation to transplant service for HCC. Extra lesion(s) of more than 1cm in 23% explants in comparison to most recent imaging indicates the progression of disease in time between imaging and transplant. This highlights the benefits of loco-regional therapy as a bridge (where possible) while on waiting list and the need for reduction in time on waiting list.

119-P

FREE FLAP RECONSTRUCTION OF HEAD AND NECK DEFECTS AFTER ONCOLOGIC RESECTION-OUR EXPERIENCE AT A TERTIARY CARE CANCER CENTER

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Background: Free flap surgery for head and neck defects has gained popularity over the years. The aim of this study was to determine the effects of risk factors such as co-morbidity, obesity, tobacco use and radiation on complications after free flap reconstruction.

Methods: We have retrospectively analyzed the medical records of patients who underwent reconstruction with free flap between January 2017 and December 2018 at Shaukat Khanum Memorial Cancer Hospital and Research Center, Lahore, Pakistan.

Results: The patients included 14 male and 6 female patients with a mean age of 51 ± 38 years. The most common primary tumor site was the tongue (54%) followed lower alveolus (26%). The most commonly used free flap was the radial forearm (60%) followed by fibula (26%). There was only 1 free flap failure while none of the risk factors have contributed to the complications. All the patients with free flap reconstruction have reported satisfactory results in terms of functional and aesthetic outcomes.

Conclusion: We have concluded that the risk factors of the patient did not increase the complications of a free flap transfer. Therefore, the risk factors of patients are no longer a negative factor for free flap transfer.

120-P

IMPACT OF HEPATIC ARTERIAL ANOMALIES ON SURGICAL DISSECTION, POST OPERATIVE RECOVERY AND COMPLICATIONS FOLLOWING PANCREATODUODENECTOMIES

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CONSULTANT SURGICAL ONCOLOGIST PATEL HOSPITAL, KARACHI³

Objective: Variations in hepatic arterial anatomy are frequently encountered in patients undergoing Pancreaticoduodenectomies (PD) and remains a challenge for the performing surgeon. Unidentified aberrant arterial anatomy can cause inadvertent injury and complications. We present the incidence, management and implications of aberrant hepatic arterial anatomy on post operative complications of patients after PD at our institution.

Methods: Patients undergoing PD between December 2014 and June 2018 were included. and divided into two groups; one group with aberrant hepatic arteries and other with normal hepatic arterial anatomy. Preoperative imaging, operative findings, post operative complications, post operative recovery and hospital stay of these patients were reviewed and compared. Aberrant anatomy was classified according to Hiatt classification (Hiatt JR et al. Ann Surg 1994;220(1):50–2)

Results: Among a total of 130 cases, vascular anomalies were seen in 42 (30%) cases. Most common anomaly seen was the replaced Right Hepatic artery arising from Superior mesenteric artery (10%). Patients were divided into two groups according to presence (group A) or absence (group B) of vascular anomalies. Postoperative pancreatic fistula occurred in 9% patients (4% Group A, 5% Group B). Delayed Gastric Emptying was seen in 20.8% patients of Group A, 20% patients of Group B. Postoperative complications were seen in 54% patients of group A and 60% in Group B. TPN was required postoperatively in 25% patients in Group A and 13% in Group B. 19% patients required readmission in Group A and 11% in Group B and 9% patients required re-intervention (6% Group A, 3% Group B). The median operative time was 450 minutes (495 min Group A, 445 min Group B). Median blood loss was 355 ml (Group A 380 ml, Group B 300 ml). Median hospital stay was 10 days (Group A 11 days, Group B 9 days). There was no significant difference between the operative or postoperative outcomes among the two groups.

Conclusion: Aberrant hepatic arterial anomalies should preferably be identified on pre operative imaging. Meticulous surgical dissection with artery first technique is useful in minimizing inadvertent damage to aberrant vessels. However presence of aberrant arterial anatomy has no impact on post operative course and recovery.

121-P

CAN POST-NEOADJUVANT SONOGRAPHIC ASSESSMENT OF AXILLA PREDICT PATHOLOGICAL OUTCOMES?

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CENTRE, LAHORE, PAKISTAN

Objective: Ongoing trials are evaluating the role of axillary imaging in staging early breast cancer but whether imaging is a reliable tool for predicting pathological outcomes in post chemotherapy patient still remains a question. We aim to evaluate the reliability of post-neoadjuvant axillary imaging in predicting pathological outcomes in patients undergoing surgery after receiving neoadjuvant chemotherapy.

Methods: Between June 2017 and June 2018, patients with breast cancer that were axillary lymph node positive and underwent axillary dissection after receiving chemotherapy were included. Pre-operative assessment of the axilla by ultrasonography has been reviewed and histopathological findings of the axillary dissection were evaluated for relevance with the sonographic assessment.

Results: During the study period, a total 180 node positive patients underwent neoadjuvant chemotherapy. On completion of neoadjuvant chemotherapy, ultrasound scan showed complete response in 147 patients, partial response in 30 patients and no response in 3 patients. On pathological evaluation of axilla following axillary dissection, 77 patients (42.8%) had node negative disease while 103 patients (57.2%) had node positive disease. There was no concordance of complete response of axillary Lymph Node (LN) on ultrasound with a pathological axillary LN complete response (p value 0.91). The area under the curve on Receiver operating characteristic (ROC) was 0.517 suggesting no association.

Conclusion: Our study found that in patients with breast cancer who were node positive at presentation and received chemotherapy upfront, axillary ultrasound scan was unable to predict the pathological status of the axillary lymph nodes. A pathological assessment by an axillary lymph node dissection following neoadjuvant chemotherapy is therefore recommended.

122-P

NATURE OF EARLY STAGE ENDOMETRIAL CANCER RECURRENCE _ A COHORT STUDY.**Zainab Zubair , Shaukat Khanum Memorial Cancer Hospital**

Background and aims: Evidence regarding the rise of endometrial carcinoma is on uprise which is highlighting the need of appropriate surveillance after the primary treatment. So the study was planned to present a comprehensive analysis of disease recurrence in a cohort of women with early stage endometrial cancer and to identify the clinico-pathological and sociodemographic predictors of disease recurrence.

Methods: All the women diagnosed with stage 1 endometrial cancer in 2009 __2013 who underwent hysterectomy were included in a hospital based cohort derived from database at Shaukat Khanum Memorial Cancer Hospital & Research Centre, Lahore. Disease recurrence upto 3 years after the primary diagnosis was assessed and follow up on survival was completed on 31 december 2017. Predictive value of clinico- pathological and socio demographic variables was evaluated.

Results: Within 3 years of primary treatment recurrence was identified in 13 (5.2 %) of the included 250 women. Predictive factors for the recurrence included the International Federation of Gynaecology and Obstetrics (FIGO) stage (OR 1.89 IB) , Charlson comorbidity index of 3 (OR: 1.88) and non endometrial histology (OR 1.77). Overall survival was significantly affected by site of recurrence. 5 year survival was 75 % for women with the vaginal recurrence and only 15 % in women with the distant metastasis. Vaginal recurrence was predicted by FIGO stage only (OR: IB 1.66), while extra-vaginal recurrence was predicted by FIGO stage (OR: IB 1.88) Charlson comorbidity index of 3 (OR 1.77) and non-endometrioid histology (OR 2.31).

Conclusion: Early stage endometrial carcinoma is associated with a low risk of recurrence within 3 years after hysterectomy and the site of recurrence is highly predictive of overall survival yet future research should seek to understand the underlying mechanism of these predictive factors so as to reduce the morbidity and mortality.

123-P

VITAMIN D DEFICIENCY - IMPACT ON BREAST CANCER RECURRENCE IN SOUTH EAST ASIAN POPULATION

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Abstract

Objective: Vitamin D has been proposed to play a significant role in recurrence and survival of patients with breast cancer. The literature however shows conflicting evidence of vitamin D association with breast cancer outcomes. We aim to look at association of vitamin D level with breast cancer outcomes in our population.

Material and Methods: From February 2010 to September 2013, patients presenting with breast cancer who had their Vitamin D levels measured at the beginning of treatment were included in the study. Patients were evaluated for tumor size, histopathological type and grade, lymph nodal disease, and receptor status. Oncological outcomes following treatment were assessed and their association with Vitamin D was evaluated.

Results: During the study period, 214 patients presenting with breast cancer were included in the study. The mean age at presentation was 49 years. Risk factors for breast cancer were identified in 22 (13%) patients. Mean tumors size at presentation was 31.4mm. Neo-adjuvant chemotherapy was given to 115 patients while 8 patients received neo-adjuvant endocrine therapy. Breast conserving surgery (BCS) was performed in 128 patients (61.8 %) and 145 (70%) patients underwent Axillary Lymph node dissection. Invasive Ductal Carcinoma (IDCa) was the most common histopathology seen in 171 (82.6%) patients. Vitamin D deficiency was recorded in 150 (73.9%) patients. Median follow up was 5.3 years (IQR 4.2-6 years), primary end point was breast cancer recurrence (local and distant relapse). Breast cancer recurrence was found in 62 (30.2%) patients whereas 32 (15.8%) patients died of breast cancer. Overall, 31.75% patients developed recurrence among the patients with vitamin D deficiency compared to 28.84% patients with normal Vitamin D levels (p value 0.271).

Conclusion: Our study suggests a very high prevalence of Vitamin D deficiency in the breast cancer population. However, based on the findings in our dataset, there appears to be no statistically significant association of Vitamin D with breast cancer recurrence.

124-P

PREDICTORS OF PATHOLOGICAL COMPLETE RESPONSE AFTER NEOADJUVANT THERAPY FOR PATIENTS UNDERGOING BREAST CONSERVATIVE THERAPY; AN EXPERIENCE FROM TERTIARY CARE HOSPITAL

Osama shakeel , Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore Pakistan

ABSTRACT

Aim: Our aim was to identify the factors responsible for pathological complete response (pCR) in breast cancer patients following neo adjuvant therapy.

Methods: All the patients who presented to our hospital from Jan 2006 to Dec 2013 with breast cancer and underwent breast conservative therapy (BCT) following neo adjuvant chemotherapy were analyzed. On follow-up examinations, occurrence of loco regional and/or distant disease was considered as recurrence. The SPSS version 20 was utilized for all statistical analyses. Multivariate cox proportional hazard model was used for the potential confounding effect of explanatory variables on end-point variables with p-value <0.05 taken as statistical significance. Results: In total of 857 patients, pCR was found in 27.7 percent (237) of the patients and partial or no response to chemotherapy was seen in 72.3 percent (620) of the patients. Demographically majority of the patients (38%) were of the age group of 41 to 50 years. Most of the patients were in stage II (65.3%), with invasive ductal carcinoma being the most prominent histopathology (80.5%) on initial presentation. Out of 857 patients, 558 (65.1%) had a positive ER receptor of which 454 (73.2%) had partial response and 104 (43.9%) had complete response. Furthermore, 299 were lying in ER negative category. Although, 166 (26.8%) had partial response and 133 (56.1%) had a complete response. P value (0.001) showed that there is an association between ER receptor status disease response (partial verses complete response) statuses. Additionally, there was statistically significant association between age in years, tumor stage, tumor grade, luminal type and progesterone receptor with disease response (partial verses complete response). In multivariable analysis, three variables were identified as significant independent risk factor for complete response: tumor stage (adjusted odds ratio [AOR] 0.59; 95% confidence interval [CI] 0.41-0.83), p-value (0.003), tumor grade; grade III (AOR 1.72; 95% CI (1.22-2.43), 0.002) and ER receptor status (AOR 0.33; 95% CI (0.23-0.45), 0.001) as shown in Table 3.

Conclusion: Patients with stage III cancers, high grade disease and ER positivity are significant predictive factors of complete pathological response.

125-P

OUR EXPERIENCE OF STAPLED ANASTOMOSIS IN PANCREATICO-DUODENECTOMY AND PALLIATIVE BYPASS SURGERY FOR MALIGNANT TUMORS

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SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE PAKISTAN

Purpose: The aim of this study was to evaluate the clinical outcomes of gastro-jejunostomy and jejunostomy performed using mechanical stapling technique during pancreatico-duodenectomy and palliative bypass surgery, focusing on complications like delayed gastric emptying and anastomotic leakage or bleeding in the early post operative period.

Methods: A total of 163 patients underwent classic Whipple's procedure or palliative bypass surgery for ampullary, peri ampullary, pancreatic or duodenal tumors between October 2014 and July 2018. After excluding 11 patients who had hand sewn anastomosis, 152 patients with stapled anastomosis were included in the study. The data was collected retrospectively and was analyzed for post-operative complications and mortality.

Results: Of the 152 patients who were operated, 116 (76%) underwent pancreatico-duodenectomy and 36 (23.6%) had palliative surgery due to irresectability or metastatic disease. There was no anastomotic leakage in our study population. There were 2 case of enteric anastomotic bleeding which were managed conservatively and 3 mortalities within 30 day post-operative period. 24 patients developed delayed gastric emptying and were managed conservatively. Rest of the details of our study population are described in the table below.

Conclusion: Our retrospective analysis shows that stapled anastomotic technique for gastrointestinal reconstruction is a safe procedure.

126-P

Towards new standards for long term survival after resection of colorectal liver metastases-Experience at Cambridge University Hospital

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Abstract:

Introduction: The literature states that 50% of colorectal cancer patients develop liver metastases (CLM), that 15-20% are resectable, with 5 and 10 year survival of 40% and 20% respectively. Given evolving onco-surgical treatments, this study examines whether outcomes following CLM resection have improved, with a view to establishing contemporary standards.

Methods: Using cancer registry and tertiary referral centre data, we studied a population of patients with a histological diagnosis of colorectal cancer, and determined CLM incidence, resection rates, and survival in a method avoiding denominator bias from referral practice. Data in the last 10 years was used and was subdivided in to an early and late era.

Findings: The incidence of CLM decreased significantly (early vs late: 23.99% vs 16.44% $p=0.001$), and overall (19.00%) was less than half of the literature reported 50%. CLM resectability rate increased significantly in the latter era from 21.8% to 32.05% ($p=0.037$), and from 32% to 48% for liver only metastases ($p=0.05$). In each case, the resectability rate in the latter era approached twice the literature reported rate 15-20%. Overall 5 and 10 year survival after resection of CLM was 69.8% and 45.6% respectively. This 10 year survival figure is more than twice the previously reported figure of 20%. There was a significant improvement in survival between the eras with 5 year survival values of 61.5% vs 73.9%, ($p=0.02$) early vs late respectively.

Interpretation: The study shows that the current incidence of colorectal liver metastases is less than half the historically reported rate, that resection rates are twice as high as reported and that 10 year survival is more than twice the reported rate. These data are important as they greatly influence the planning of liver surgery services, and suggest new contemporary standards for outcome after resection of colorectal liver metastases.

Keywords: Colorectal, liver metastasis, Liver resection

127-P

EFFECTIVENESS OF CHEMICAL NEUROLYSIS IN MANAGEMENT OF REFRACTORY HEAD AND NECK CANCER RELATED PAIN: A RETROSPECTIVE STUDY

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Purpose: Pain is a common symptom of head and neck cancers (HNC). The mainstay of pain management consists of disease modifying treatments, such as surgery, radiotherapy and chemotherapy, and pharmacological management. Nonetheless, in some instances pain may become refractory and not resolve with conventional modalities^{1, 2}. Chemical neurolysis is a technique that utilizes chemical neurolytic agents to temporarily degenerate a targeted nerve³. Data on the effectiveness of chemical neurolysis in management of refractory pain among palliative patients of HNC is limited¹⁻³. The aim of present investigation was to determine the effectiveness of neurolysis procedures for management of refractory HNC related pain.

Material and methods: This was a retrospective chart review of all adult patients that underwent neurolysis procedure in the regions of head and neck for management of refractory HNC related pain at Shaukat Khanum Memorial Cancer Hospitals between November 2017 and July 2018. Information regarding demographic, diagnostic, and therapeutic characteristics was extracted and analysed. Characteristic pain intensity (CPI), defined as an average of least, worst, and current pain scores, was calculated immediately prior to and one-month following the neurolysis procedure. A criterion for successful outcome was defined as at least 75% improvement in CPI, one-month following the neurolytic procedure. Chi-Square test, Fisher's-Exact test, and independent t-test were used for analysis between independent and dependent variables.

Results: Total of 33 neurolytic procedures were performed on 21 participants, among these 81% were males (table). The mean age of the sample was 57.2 ± 9.7 years. A total of 66.7% of participants experienced successful outcome. Moreover, 73.9% reported increase in the duration of effectiveness of analgesics, 62.5% reported satisfaction with pain management, and 30.4% patients reduced the use of analgesics following neurolysis procedures. The effectiveness of neurolysis was found to be statistically associated with presence of pain in the auricular region ($p=0.027$).

Conclusion: Chemical neurolysis provides significant relief for approximately two-third patients with refractory HNC related pain. Furthermore, it can improve the effectiveness of pharmacotherapy and patient satisfaction with pain control. The presence of pain in the auricular region was found to have a negative influence on the successful outcome.

128-P

INTRODUCTION PRACTICE OF INFECTION CONTROL PROCEDURES AMONG DOCTORS IN ANESTHESIOLOGY DEPARTMENT AT THE SHAUKAT KHANUM HOSPITAL, LAHORE.

OMER FAROOQ, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE PAKISTAN

Objective: Hospital acquired infections are one of the leading cause of morbidity and mortality and are common in developing countries. Strict practice of infection control protocols is very important in preventing the spread of nosocomial infections. This audit evaluates the practice of infection control techniques among doctors of anaesthesiology in Shaukat Khanum Hospital, Lahore.

Methods: This cross-sectional descriptive study was conducted at the Anaesthesia department of Shaukat Khanum Hospital, Lahore. All the doctors were recruited in this study. A group of trained technicians observed the practice of infection control protocols by doctors while conducting procedures such as Drug delivering, Epidural catheterization, I/V catheterization and CVP line insertion. These doctors were blinded to the procedural aspects of the study. All data were analyzed in detail.

Results: There were a total number of 50 drug delivery , 38 I/V cannulations, 14 Epidurals and 7 CVP lines conducted during the study. A total of 46/50 drug delivery (92%), 27/38 I/V cannulation (71%), 14/14 Epidural catheters (100%), 6/7 CVP (85.71%) were conducted in fully aseptic measures. Total (89.28%) of the doctors followed all steps of infection control while conducting anaesthesia procedures, whereas (10.71%) did not.

Conclusion: This audit shows that a high proportion of doctors were observing infection control protocols according to international guidelines. But steps should be taken to observe maximum infection control percentage and improve practice among doctors in anaesthesia department.

129-P

ANAESTHETIC MANAGEMENT OF PATIENTS FOR BRACHYTHERAPY IN RADIATION SUITE

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BACKGROUND / INTRODUCTION

Anaesthesia outside operating room is quite challenging due to multiple factors. Brachytherapy involves radiation treatment of female patients for cervical cancer. It includes keeping a device in genital tract, followed by a CT scan to confirm its placement and finally intense radiation exposure to localised area. It is difficult for anaesthesiologists to manage these patients due to remote access, away from operating room, and requirement of slave monitors.

AIMS / OBJECTIVES

A clinical audit to evaluate the outcome of different anaesthetic techniques to effectively manage the patients planned for brachytherapy in radiation suite.

METHOD

The medical and anaesthetic record of all patients planned for brachytherapy under anaesthesia were recorded. The data collection was carried out from Hospital information system (HIS) for a period of one year (July 2017 to June 2018) at the setting of Shaukat khanum Memorial Cancer Hospital & Research Centre Lahore.. Patient's age, ASA Physical status, different anaesthetic techniques either General & Spinal anaesthesia, any complications related to anaesthetics were analysed.

RESULTS

Overall 29 patients underwent brachytherapy under anaesthesiologist's care. All female patients & mean age of 51 years. 1/3rd patients were ASA status 3 and rest were ASA status 2. Regarding anaesthetic technique, 11 patients (38%) received general anaesthesia and 18 patients (62%) received spinal anaesthesia. Among general anaesthesia cases, 3 patients developed certain anaesthesia related problems like delayed recovery, bronchospasm and vomiting. However only 1 patient of spinal anaesthesia required additional care for hypotension.

DISCUSSION / CONCLUSIONS

Different anaesthetic techniques have their own risks and benefits according to type of procedure and medical problems of the patients. Keeping in view the remote clinical area, limited patient access and requirement of adequate analgesia for prolonged period of time during radiation exposure, spinal anaesthesia may be an effective modality in selected number of patients.

130-P**INCIDENCE OF POST-OP NAUSEA AND VOMITING (PONV) AMONG CANCER PATIENTS AFTER SURGERY****AAMIR BASHIR, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE,
LAHORE PAKISTAN****BACKGROUND / INTRODUCTION**

Post-op nausea and vomiting is a common problem after general anaesthesia and it is one of the common reasons for unplanned admission after day care surgery. Prevention of PONV is an important quality indicator of anaesthetic care. PONV can occur due to multiple factors including age, anaesthetic techniques, type of surgery, chemotherapy and female gender etc. Screening of high risk patients and adequate prophylaxis can help to reduce the incidence of PONV.

AIMS / OBJECTIVES

Clinical audit to document the incidence of post-op nausea and vomiting among cancer patients after surgery.

METHOD

Hospital information system (HIS) was used for data collection on quarterly basis over a period of 18 months from January 2017 to June 2018 at the setting of Shaukat Khanum Memorial Cancer Hospital & Research Centre Lahore. All the patients over one-week list were included in each quarter. Incidence of PONV was documented as nausea or vomiting requiring medications from nursing notes.

RESULTS

Overall, record of 721 patients was analysed. PONV occurred in 160 patients (22%). Considering quarterly based results, from January 2017 to June 2018, it was 21.5%, 26.6%, 21.4%, 21%, 20%, and 23% in each quarter.

DISCUSSION / CONCLUSIONS

An effective screening of high risk patients, adequate prophylaxis for PONV can reduce its incidence significantly. Average benchmark for incidence of PONV is about less than 30%. Our results show adequate management of the patients with reference to incidence of PONV.

131-P

AN AUDIT OF IMPACT OF PARENTAL PRESENCE DURING ANESTHESIA INDUCTION ON CHILD'S ANXIETY IN INTRATHECAL/BONE MARROW ASPIRATION AND BIOPSY PROCEDURES

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Introduction: The Induction of anesthesia is a stressful event for pediatric population and it has an adverse psychological impact on them especially after repeated anesthesia. It can also provoke reactionary behavior in post operative period. An audit was performed to assess the impact of parental presence at the time of induction of anesthesia on child's anxiety that were undergoing intrathecal/bone marrow aspiration and biopsy procedures.

Method: A total of 80 pediatric patients undergoing intrathecal/bone marrow aspiration and biopsy were divided into two groups. One group included patients whose parents were accompanying the child to the operative room and the parents remained there till the loss of consciousness of child at anesthesia induction. In the other group children were brought to the operating room without their parents. The anxiety in the patients was measured by the faces version of the Modified Child Anxiety Scale.

Results: There was no difference between the two groups on the anxiety level of children when they were taken to the operating room but patients who were accompanied by their parents were more relaxed at the time of induction of anesthesia. The parents who accompanied their children were also more satisfied. The recovery was smooth in both the groups.

Conclusion: Patients who were accompanied by their parents were more relaxed than patients who were not accompanied by their parents at the time of induction of anesthesia and improve the quality of anesthesia induction.

132-P

LEVEL OF SATISFACTION OF CANCER PATIENTS WHO UNDERWENT NON ABLATIVE INTERVENTION FOR PAIN RELIEF

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**M.A KHALID DR., S.S ALI DR., A.BASHIR DR., A.W KHAN DR
SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE PAKISTAN**

Introduction: Cancer pain may result either from primary lesion or metastasis or may be due to invasive or diagnostic procedures. Cancer treatments that may cause pain include surgery, chemotherapy, radiations, immunotherapy and hormonal therapy. The presentation of pain depends on etiology. Cancer pain is typically nociceptive, visceral or neuropathic or the combination of these. Interventional techniques to control pain may be used as adjuvants or alternatives to pharmacologic treatment. These techniques may also be important in those patients who are unable to tolerate the side effects of pharmacologic treatment. An audit was performed to assess the level of satisfaction in cancer patients who underwent non ablative intervention for pain relief.

Method: All the cancer patients who underwent non ablative intervention for pain relief from December 2016 to July 2018 were included in the audit. Data was collected from patients' record and their pain score was measured by "Numeric rating scale". The level of satisfaction was inquired from the patient themselves.

Results: The results related to 58 cancer patients submitted to interventional procedure during the studied period. 70.7% patients were satisfied with the results of intervention done. 24.3% patients were not satisfied while 5% of the patients were partially satisfied. The percentage of satisfied patients and reduction in intensity of patients was significant.

Conclusion: These results are in accordance with literature and support the efficacy of interventional procedures for relief of pain intensity and patient's satisfaction.

133-P

POST-OPERATIVE SORE THROAT WITH USE OF SUPRA-GLOTTIC AIRWAY DEVICES IN CANCER PATIENTS UNDERGOING ELECTIVE UROLOGICAL PROCEDURES UNDER GENERAL ANESTHESIA

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ABSTRACT:

Background: Sore throat is a common complaint after surgery. It affects patient satisfaction and can affect activity after discharge. The Supraglottic airway devices (SAD) offers an alternative to traditional endotracheal intubation with potential benefit in preventing post operative sore throat.

Objective: The aim of this study was to compare the incidence of post operative sore throat following two different Supraglottic Airway Devices, the laryngeal mask airway (LMA) and the I-GEL.

Design: A randomized single-blind controlled trial.

Setting: Shaukat Khanam Memorial Cancer Hospital and Research Centre, Lahore.

Results: A total number of 68 patients of mean age 44.4 years (22 to 73) underwent elective Urological procedures under General Anesthesia in which the airway was secured using the LMA in 34 patients and the other half received the I-GEL. A total of 11 patients had post operative sore throat in the LMA group compared to only 4 patients in the I-gel group.

Conclusion: The I-gel appears to be slightly better in terms of preventing post operative sore throat in patients receiving Supraglottic Airway devices for General Anesthesia.

134-P

COMPARISON OF DIFFICULT AIRWAY TROLLEY EQUIPMENT AT SKMCH AND DIFFICULT AIRWAY SOCIETY (DAS) GUIDELINES

DANISH IMTIAZ**SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE PAKISTAN**

Introduction: Difficult airway is the most important cause of anesthesia related morbidity and mortality. A large number of deaths attributable to anesthesia are associated with both anticipated and unanticipated difficult airway. A coordinated team effort along with availability of all the required equipments in a difficult airway trolley is essential to deal with catastrophic situation of difficult airway.

Objectives: Aim was to compare the standards of practice at SKMCH and DAS guidelines.

Method: We analyzed a checklist which was prepared according to the recommended DAS guidelines. Two difficult airway trolleys were inspected and checklist was marked for the presence or absence of equipments in the month of July 2018 with the help of operation theater technician.

Results: Both trolleys placed in the Operation Theater were mobile, stocked in the logical sequence, clearly labeled and had DAS guidelines for difficult airway management attached. Both the trolleys had labeled drawer and had laryngoscopes with Macintosh blades of various sizes. LMA's, IGEL, facemask, oro pharyngeal and nasal airways of all sizes were present in both trolleys. Cannula cricothyroidotomy equipment was present in single trolley only. A flexible intubating fiberoptic is accompanied with both trolleys. Both trolleys had missing straight blades and no equipments for surgical cricothyroidotomy.

Conclusion: To improve our practice for better and efficient handling of difficult airway which leads to reduction in morbidity and mortality and safe anesthesia practice.

135-P**PRE-OPERATIVE ASSESSMENT AT ANAESTHESIA CLINIC FOR MAJOR CANCER SURGERY –****R- RAI****SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE PAKISTAN****BACKGROUND / INTRODUCTION**

Anaesthesia pre-operative assessment clinic holds key role in optimization of patients having multiple co-morbidities especially in cases where major surgical procedures are involved. The anaesthesia itself can be high risk if patient is not evaluated or optimized and presents directly as day case.

AIMS / OBJECTIVES

Audit on number of patients visited preoperative clinic and out of which how many patients required optimization. Issues that could be optimised were but not limited to cardiopulmonary problems, neurological, renal, endocrine, nutritional statuses and psychological conditions like anxiety, all included.

METHOD

We analysed the medical record of all the patients who were planned for major surgeries in the month of July from 01/07/18 to 31/07/18 through HIS system in the setting of SKMCH& RC Lahore. It was noted whether these patients visited pre-operative anaesthesia clinic or not and also that any optimization was required or not.

RESULTS

A total of 106 cases were analysed, Emergency procedures (5 cases) were excluded. Among all, 71 patients visited the pre-op clinic, out of which 40 patients required optimization for their ongoing medical problems but 30 patients did not present in clinic out of which 17 patients required optimization.

DISCUSSION / CONCLUSIONS

Safe conduct of anaesthesia requires preoperative assessment, preparation and planning. This should occur in advance of surgery, allowing a review of concurrent disease, medications and optimization to improve the overall patients outcome.

136-P

ABSTRACT**CONCURRENT RADIOTHERAPY WITH ERLOTINIB FOLLOWED BY MAINTAINENCE ERLOTINIB IN EGFR MUTATION POSITIVE LOCALLY ADVANCED ADENOCARCIONOMA: OPEN LABEL, SINGLE ARM STUDY.****NOOR-UN-NISAA ZIA; MAYO HOSPITAL, LAHORE, PAKISTAN**

Purpose: To assess efficacy and safety/tolerability of erlotinib in combination with radiation therapy followed by maintenance therapy in Stage III and IV, epidermal growth factor receptor (EGFR) mutation-positive lung adenocarcinoma patients.

Materials and Methods: Patients received concurrent radiation therapy (60-70 Gy in 30-35 fractions) along with erlotinib 150mg/day, followed by erlotinib 150mg/day as maintenance therapy till disease progression. Primary endpoint: overall response rates (ORR) according to RECIST 1.0. Secondary endpoint: Progression Free Survival (PFS), Overall Survival (OS) and toxicities assessment with CTCAE v3.0. Before starting erlotinib all eligible patients recieved four cycles of standard chemotherapy with platinum doublets (Pemetrexed, Docetaxel, Paclitaxel, Gemcitabine)

Results: 13 patients out of total 62 enrolled had either progressive disease or did not complete therapy even before execution of planned experimental therapy. Total 49 patients who actually completed concurrent radiation therapy with erlotinib were included in final analysis. Median age of the patients was 57.0 ± 8.51 years (age range 31-73 years). 40 (81.6%) were male subjects and 37 (75.5%) were smokers. ORR was 71.4% (Complete

Response: 12.2%, Partial Response: 59.2%, 95% confidence Interval (CI) 2.02-2.46). Median PFS for stage III disease was 7.4 months (95% CI 22.57-41.43) and for stage IV disease 2.8 months (95% CI 9.1-14.89). Median overall survival was 12.9 months (95% CI 40.10-71.89) and 5.5 months (95% CI 20.14-27.86) for stage III and stage IV disease respectively. Common adverse events (any grade) observed in order of their frequency were rash (61.2%), fatigue (42.9%) and diarrhea (36.7%).

Conclusion: Concurrent radiotherapy with erlotinib was effective and well tolerated in patients with locally advanced adenocarcinoma lung harboring EGFR mutation.

137-P

MANAGEMENT OF CAMPANACCI TYPE III GIANT CELL TUMOR

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Abstract

Objective: Giant cell tumor is an aggressive benign tumor of the bone, involving long bone. They are commonly present around knee joint. There are different treatment options and we assessed the treatment outcomes of various procedures.

Methods: This case series was conducted in the Department Orthopedics Surgery, Combined Military Hospital, Lahore from December 2011 to March 2016 in a duration of five years four months. Our sample size was fifteen patients between 32 to 60 years of age with giant cell tumor. We included all patients with giant cell tumors newly diagnose on history, clinical examination, radiographs, magnetic resonance image (MRI) and bone biopsy. We excluded all patient with history of previous surgery, uncontrolled diabetes, chronic liver failure, chronic kidney disease and congestive heart failure. We managed all patients with various treatment option included resection arthrodesis with vascular fibular graft, mega prosthesis, and wide margin excision with bi-focal segment transport with external fixator device. We observed treatment effectiveness, limb length discrepancy, and post treatment complications. Our follow up period was four years. We followed all patients six monthly for one year and subsequently at one year.

Results: There were 13 (86.7%) male and two (13.3%) females. Majority seven (46.67%) patients were present between 41 to 50 years of age with their mean±SD (30.66±13.87). Amongst three (20%) patients with involvement of proximal humerus, resection arthrodesis with vascular fibular graft was done, three (20%) patients with distal radius, two (66.66%) had resection arthrodesis with vascular fibular graft and one (33.34%) had mega prosthesis. Two (13.3%) had resection arthrodesis (50%) and mega prosthesis (50%). Majority five (33.3%) had proximal tibia involvement were treated with three (60%) resection arthrodesis and two (40%) with mega prosthesis. Among Two (13.3%) patients who had distal tibia involved were managed with wide margin excision, and bi focal segment transport with external fixator device. Out of the total 15 cases, nine (60%) had lower limb involvement and there was only one (11.11%) leg length discrepancy.

Conclusion: We concluded from the study that management of giant cell tumors with mega prosthesis, segment trans port and resection with free fibular graft was equally good, but patient satisfaction was better in patients who had resection with mega prosthesis.

Keywords: Giant cell tumor, patient satisfaction, mega prosthesis

138-P

PAIN INTERVENTIONS FOR CANCER AND NON-CANCER PAIN: A RETROSPECTIVE ANALYSIS OF SHAUKAT KHANUM MEMEORIAL CANCER HOSPITAL AND RESEARCH CENTRE EXPERIENCE

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Introduction: With the recent advancement in medicine there has been a great emphasis on the management of chronic pain which remains as one of the major contributing factors for functional limitation in patients and poor quality of life as well as a financial burden on healthcare. The prevalence of chronic pain is estimated to be 37.3% in developed and 41.1% in developing countries¹. Previously the mainstay management for chronic pain was oral opioids and topical therapies. The prolonged use of oral medication is associated with side effects and patient compliance is an issue.

Recently researchers are focused towards discovering the changes that happen in brain and system because of chronic pain to better understand the physical basis and to establish better treatment options. Newer treatment modalities are aimed at terminating the vicious pain cycles and in this regard peripheral nerve blocks have proven to be very effective.

At present chronic pain remains as a major concern in both cancer and non-cancer patients. The purpose of this study is to evaluate the role of interventional pain management in our setting.

Objectives: The aim of this study is to evaluate the effectiveness of interventions for both cancer and non-cancer patients by objective assessment of the patients before and after the procedure.

Inclusion Criteria: All the patients undergoing pain interventions procedures in our setting

Exclusion Criteria: None

Study Design:: Retrospective observational study

Materials and Methods: The study will be conducted at Shaukat Khanum Memorial Cancer Hospital. It will include all the patients who underwent nerve block procedures both cancer and non-cancer patients from December 2016 to August 2018. The patients will be assessed by using numerical rating scale (NRS) for pain, reduction in analgesic doses and patient satisfaction after 1 week of the intervention and further after 4 weeks of intervention. The data will be analyzed statistically by using mean values and calculating percentages.

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139-P

Evaluation of dose conformity for intensity-modulated radiotherapy of pelvic cancer treatment.

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SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE , LAHORE PAKISTAN

Purpose: Better conformity may help in delivering minimum dose to organs at risk (OARs) and maximum dose to planning target volume (PTV). As per the requirements of modern radiotherapy, 95% isodose should cover the PTV, so conformity indices (CIs) are used for evaluating quality of conformation of treatment plans. This study aimed to investigate degree of conformity for pelvic patients using intensity-modulated radiotherapy (IMRT) technique. Three formulas of CIs described in literature were analyzed in this study. Materials and Method This study was performed to evaluate degree of conformity of 18 patients treated with radiotherapy treatment plan using cumulative dose volume histogram. Effectiveness of different CIs was explored for IMRT plans using 15 MV photon beam. Doses delivered to OAR were also studied.

Results: CI suggested by the International Commission on Radiation Units and Measurements, radiation CI and CI prescription isodose to target volume (PITV) had mean \pm standard deviation values of 1.02 ± 0.018 , 0.98 ± 0.017 , and 1.63 ± 0.333 , respectively. Dose distribution for all patients was highly conformal and clinically acceptable. Values of CI PITV exceeded acceptable value for 27% patients with minor deviation. No statistically significant differences were observed for three CIs reported. Target volume lies between 95% and 107% of prescribed dose which shows ideal target coverage. **CONCLUSION:** This simple parameter is advantageous since it is easy to interpret and helped determine quality of treatment plan. This study clearly demonstrated that favorable dose distribution in PTV and OARs is achieved using IMRT technique, and hence, the risk of damage to normal tissues is reduced.

Key Words: Conformity index, coverage, intensity-modulated radiotherapy, pelvic cancer, planning target volume, treatment plan evaluation

140-P**PARAGANGLIOMA OF EAR CANAL: CASE REPORT****SHAZIA ASLAM; HISTOPATHOLOGY MADINA TEACHING HOSPITAL ,FAISALABAD, PAKISTAN****Abstract:**

Paraganglioma is a tumor of neural crest origin. Paraganglion cells have chemoreceptor antibodies. They can arise. Paraganglioma according to WHO categorization are put in the class of neuroendocrine tumors. They may develop in various parts of body. They can be benign or malignant. Grossly these are extremely vascularized and therefore have red colour. Symptoms of these tumors depend on site & chemical substances produced by tumor cells. We at Madina Teaching Hospital, Faisalabad came across two cases of paraganglioma. Case one was a young male who presented with hearing loss & tinnitus in ENT department. Clinical findings of right ear canal surgical excision was done which on Histopathologic examination turned out to be consistent with paraganglioma. Case two was a young male who presented with hematuria and underwent transurethral resection of bladder mass. Histopathology along with immunohistochemical markers on the biopsy specimen were diagnostic of paraganglioma. Although the frequency of these tumors is low but they should be kept in the list of differential diagnosis.

141-P

EVALUATION OF FASTING TIME IN PATIENTS UNDERGOING ELECTIVE SURGERY AND COMPARE PRACTICE AT SKMH WITH GUIDELINES OF AMERICAN SOCIETY OF ANESTHESIOLOGISTS (ASA)

USMAR ASHRAF**SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE PAKISTAN**

Introduction: Fasting time is one of the most important components of preoperative preparation of patients. Adequate fasting time is essential for patients to undergo surgery to avoid serious complications. Therefore it is in best interest of the patient and both medical team to ensure adequate fasting time and also avoid prolonged fasting time.

Objectives: Aim was to compare the practice at SKMH with guidelines of American society of anesthesiologists.

Method: Evaluated fasting time in 100 patients undergoing elective surgery in the holding bay. Asked about whether education related to fasting time regarding solids, juices and clear fluids was provided or not.

Results: After evaluating 100 patients it was observed that majority of the patients underwent through prolonged fasting times. These patients were not educated properly about fasting times for solids, breast milk & clear fluids. Maximum fasting time observed was 19 hours and minimum fasting time was 6 hrs.

Conclusion: To improve our practice and to avoid any complication we need to follow guidelines of American society of anesthesiologists. Patient education must be assured about fasting times for solids, juices and clear fluids.

142-P

WARBURG EFFECT – UNUSUAL CAUSE OF LACTIC ACIDOSIS IN CANCER PATIENTS**AUTHORS****NASIR KHAN; YALE SCHOOL OF MEDICINE NEW HAVEN, CONNECTICUT**

Background: Lactic acidosis is the most common cause of anion gap metabolic acidosis in critically ill patients and is associated with significant mortality. While most cases of severe lactic acidosis are from either decreased tissue perfusion or oxygenation (type-A lactic acidosis), other causes should be considered in the differential diagnosis, especially in cancer patients. We present a case of repeated episodes of lactic acidosis, first from tumor lysis syndrome (TLS) and then from anaerobic tumor metabolism in a critically ill patient with Non-Hodgkin Lymphoma (NHL).

Methods: A 75-year-old woman with widespread Diffuse Large B-Cell Lymphoma diagnosed three years previously, complicated by severe TLS during induction chemotherapy requiring renal replacement therapy in the past, was admitted with severe metabolic acidemia from lactic acidosis (serum lactate peaked at 30 mmol/L) in the setting of another severe TLS episode triggered by ibrutinib chemotherapy. She was treated with rasburicase and intravenous fluids as well as temporary renal replacement therapy. Her clinical and laboratory parameters improved quickly with resolution of her lactic acidosis, and she was taken off of renal replacement therapy with return of her renal function to normal. One week later she developed persistent hypoglycemia (glucose values in the 50 mg/dl range despite D10W infusion) followed rapidly by severe lactic acidosis with arterial pH below 7 and serum lactate peak of 29 mmol/L. She remained hemodynamically stable with normal liver and renal function, and her labs did not support TLS: her LDH was only moderately elevated, with normal serum uric acid, calcium and phosphate. Based on her lab findings of persistent hypoglycemia as well as severe lactic acidosis, and CT scan showing progression of her lymphoma, we attributed her lactic acidosis to anaerobic metabolism by her rapidly growing tumor.

Conclusion: The Warburg Effect, described by Dr *Otto Heinrich Warburg* in 1924, is the metabolic shift of malignant cells to anaerobic glycolysis for ATP production, especially during phases of rapid tumor growth. The resultant inefficient utilization of glucose and generation of large amounts of lactate can lead to clinically significant hypoglycemia and severe lactic acidosis

143-P**SMALL MOLECULAR LIPOPHILIC MOLECULES REVERSE THE EGFR RESISTANCE TO TYROSINE KINASE INHIBITORS IN BREAST CANCER CELL LINES****SYEDA ASMA NAQVI; UNIVERSITY OF KARACHI, KARACHI, PAKISTAN**

Cancer therapy has now been shifted from the use of cytotoxic agents to the development of targeted therapies (tyrosine kinase inhibitors) directed at the “oncogenic motors” involved in cancer cell proliferation and invasion of breast cancer cells. Such targeted therapies have considerably improved the efficacy of anti-cancer treatment, when compared with chemotherapy. However, targeted therapies invariably encounter resistance in the course of treatment. Resistance is often caused by mutations occurring in the targeted tyrosine kinase, or by other allosteric modifications of the tyrosine kinase.

The present study was carried out to identify molecules that may synergize with tyrosine kinase inhibitors to overcome the resistance of breast cancer cells. In the first phase of the study, 1200 fully characterized compounds were tested for their activity against two breast cancer cell lines MCF-7 and MDA-MB-231. Compounds showing the most potent activities were further selected for the combination studies with tyrosine kinase inhibitors (TKIs), to look for the synergistic interactions between the compounds and TKIs. In the second phase, successful synergistic combinations were tested for their effects on apoptosis induction, caspase activation, and inhibition of phosphotyrosylated proteome of the cells, epidermal growth factor receptor (EGFR), and phosphotyrosylated EGFR in breast cancer cells. It was observed that in MDA-MB-231 cells apoptosis is induced by intrinsic apoptosis pathway through the activation of caspases 9 and 3, while in MCF-7 cells, extrinsic pathway of apoptosis is induced through the activation of caspases 8 and 6. In conclusion, new synergistic combinations were found, involving molecules with minimal activity against the EGFR, but capable of considerably increasing the activity of the original TKI, thereby overcoming the cellular resistance to this TKI. All the molecules capable of boosting the response to a TKI were shown to be lipophilic. This implies that such molecules/compounds have the capacity to insert in the phospholipids of the plasma membrane, promiscuously influence the configuration of the EGFR transmembrane receptor tyrosine kinase, and partially restore the inhibitory capacity of the TKI on the EGFR. Therefore, the use of lipophilic molecules may be a useful approach to overcome EGFRs' resistance to TKIs.

144-P

ABSTRACT TILE:-**UTILIZING CIRCULATING TUMOR DNA (ctDNA) AS A LIQUID BIOPSY FOR ASSESSING INTRA-TUMOR HETEROGENEITY IN BREAST CANCER****KALSOOM AHTAZ, FORMAN CHRISTAN COLLEGE LAHORE PAKISTAN****ABSTRACT:-**

PURPOSE: To investigate that whether circulating tumor DNA can provide the same genetic mutation information as a genomic DNA or they are carrying some new mutations as cancer evolves with passage of time.

OBJECTIVES: Whether ctDNA can be used to exhibit mutations in BRCA1 gene as a noninvasive tool in breast cancer.

Material & Methods: Whole blood samples of 40 breast cancer patients were collected from Oncology Department, Jinnah hospital Lahore. Genomic DNA was extracted from whole blood using manual method. ctDNA was extracted using the NucleoSpin Plasma XS kit (Macherey Nagel) according to the optimized manufacturer's protocols. Six primers for Exon 11 (3426bp), and one primer for founder mutation in Exon 2 of BRCA 1 gene were designed by CLC Genomic Workbench. For mutational screening our method of choice was High Resolution Melt Curve Analysis (HRM). To validate the HRM method, 10 samples were reanalyzed using Next Generation sequencing.

Results: We analyzed & detected founder mutation (185delAG) in Exon 2 of BRCA 1 gene in genomic DNA of 30 patients with 2 negative controls by HRM. We found that a founder mutation was present in 15 patients, thus bringing the total contribution of BRCA 1, Exon 2 founder mutation to 50% in our study population. Contrary to one common mutation of BRCA 1 Exon 2, many variants are identified in Exon 11. But interestingly we found that same variants were present in ctDNA of patients in 20 cases. Our data also showed that in 12 samples, ctDNA displayed variation that was not present in genomic DNA.

Conclusion: Our results reinforced the idea that ctDNA show a high concordance rate with genomic mutations and can be used for real-time monitoring in vivo, such as prediction of clinical treatments. Moreover it seems that penetrance of BRCA 1 mutations specifically founder mutation in exon 2 is about 50% in population which is parallel with the literature. But based on this preliminary research, it seems that there might be some other genes that contribute more significantly to familial breast carcinoma in Pakistani population.

145-P

INDOLEAMINE 2,3-DIOXYGENASE EXPRESSION AND ACTIVITY IN BREAST CANCER PATIENTS: A PRELIMINARY RETROSPECTIVE STUDY FROM PAKISTAN**ASIM FAROOQ^{1,2}, ASIF LOYA³, IFTIKHAR ALI RANA³, MUHAMMAD TAHSEEN³, MUHAMMAD ABU BAKAR⁴, MUHAMMAD USMAN RASHID¹, KASHIF ASGHAR^{1*}****1 DEPARTMENT OF BASIC SCIENCE RESEARCH, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE PAKISTAN****Abstract**

Background: The role of defective immune system is well established in breast cancer patients. The heme containing immunosuppressive enzyme, indoleamine 2, 3 dioxygenase (IDO) is associated with advanced disease in cancers and may enhance immunological tolerance of tumors. IDO is reported to be overexpressed in breast cancer cases. The knowledge of IDO expression and its activity in breast cancer patients may specify the utility of IDO inhibitors in these patients. Here, we conducted the study to investigate IDO expression and its enzymatic activity in breast cancer cases from Pakistan, a country with one of the high incidence of this cancer in its region.

Methods: Immunohistochemical analysis was performed to evaluate the expression of IDO, estrogen receptor (ER), progesterone receptor (PR), human epidermal growth factor receptor 2 (HER-2) on formalin-fixed, paraffin-embedded (FFPE) breast cancer tissue of 15 patients. The association of IDO expression was also evaluated with other clinic-pathological features. The serum samples were obtained from these cancer patients (n=15) and healthy controls (n=15) to investigate the IDO enzymatic activity by colorimetric assay.

Results: Immunohistochemical analysis revealed that IDO was overexpressed in breast cancer patients (11/15; 73.3%). IDO overexpression was associated with tumor size ($p < 0.02$). A significantly higher IDO enzymatic activity was noted in breast cancer patients than the control ($p < 0.0001$).

Conclusion: In conclusion, our study showed that IDO expression is associated with tumor size among breast cancer cases and may suggest its role in disease progression. IDO might be utilized as an immune therapeutic target in Pakistani breast cancer.

Key Words: Indoleamine 2, 3-dioxygenase, Breast cancer, Pakistan

146-P

PROGNOSTIC AND DIAGNOSTIC POTENTIAL OF CD44 IN MALIGNANT AND NON-MALIGNANT COLON

SAHRISH TARIQ¹, MUHAMMAD TAHSEEN¹, MUHAMMED AASIM YUSUF¹, AAMIR ALI SYED¹,
SHAHID KHATTAK¹, ASAD HAYAT AHMAD¹, SAIRA SALEEM¹
¹SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTER PAKISTAN

Abstract

Purpose: Colorectal cancer (CRC) is the 3rdmost common cancer type worldwide and the 4thmost common cause of cancer-related mortality with almost 694,000 people dying annually. CD44 has various roles including potential marker of tumor aggressiveness and promising marker of cancer stem cells. CD44 is overexpressed in colon cancers often due to hyper-activation of the WNT signaling pathway. The aim of this prospective study was to detect protein expression of CD44 associated with advancement of colon cancer (CC). A qualitative approach was used to determine the changes in the expression of primary CC (metastatic and non-metastatic) relative to non-malignant colon tissue so its diagnostic and prognostic role can be established.

Methods: A total of 30 colon specimen were obtained (following consent) from patients, undergoing screening colonoscopy and/or invasive surgery (open or laparoscopy) from 2015-2017, at SKMCH&RC, Pakistan. The manifestation of normal, hyperplastic or neoplastic cells in the attained specimen was confirmed by two independent histo-pathologists. For each sample, total proteins were extracted, quantified by Bradford Assay followed by Western blotting to identify changes in CD44 protein expression.

Results: Expression of CD44 variants was detected both in metastatic and non-metastatic colon carcinomas. The CD44 expression in non-adenomatous polyps and normal colon lining did not translate into identifiable histologic features.

Conclusion: Colon cancer represents both anatomical and stage-specific differences. Our study provides an insight into colon-specific cancer progression at molecular level in order to identify CD44 as a unique stratified disease marker. Further validation is required to confirm CD44 as a therapeutic

147-P

RECURRENT BRCA1/2 MUTATIONS TESTING IN PAKISTANI BREAST/OVARIAN CANCER PATIENTS BASED ON A HIGH-THROUGHPUT GENOTYPING ASSAY**UMARA SHEHZAD¹, NOOR MUHAMMAD¹, FAIZ ALI KHAN¹, HUMAIRA NAEEMI¹, UTE HAMANN², MUHAMMAD USMAN RASHID^{1,2}****1BASIC SCIENCES RESEARCH, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE (SKMCH & RC), LAHORE, PAKISTAN; 2MOLECULAR GENETICS OF BREAST CANCER, GERMAN CANCER RESEARCH CENTER (DKFZ), HEIDELBERG, GERMANY**

Objectives: Approximately 5–10% of all breast cancer (BC) and ovarian cancer (OC) are the result of an inherited predisposition of heterozygous germline alterations in two major high-penetrance BC susceptibility genes, *BRCA1* and *BRCA2*. Individuals with pathogenic *BRCA1/2* mutations have increased lifetime risk of developing BC/OC as well as various other malignancies. In our preliminary study from Pakistan, *BRCA1/2* mutations accounted for 17.0% (30/176) of BC/OC families. However, these families were screened by a less sensitive assay, protein truncation test (PTT), for approximately 60% coding sequence of *BRCA1* (exon 11) and *BRCA2* (exon 10 and 11). We conducted a study to analyze this 60% coding sequence of both genes among all *BRCA1/2* negative cases by a highly sensitive technique.

Methods: Index patients from 134 unrelated BC/OC families previously tested negative were analyzed through highly sensitive TaqMan[®] genotyping assay for 24 recurrent *BRCA1/2* mutations in Pakistani population that could have been missed due to the limited sensitivity of PTT assay. Positive controls were also included in each analysis. Mutations were confirmed by DNA sequencing analysis.

Results: Using TaqMan[®] genotyping assay, in total three *BRCA1/2* mutations were identified in four families (4/134; 3%); all localized in exon 11. *BRCA1* c.685del mutation was identified in one Punjabi BC and one Pathan OC patients diagnosed at age 28 and 33, respectively. *BRCA1* c.1793T>G mutation was found in a Punjabi BC patient at age 28 with family history of uterine cancer at age 42. *BRCA2* c.5222-5225del mutation was identified in a Punjabi male BC at age 39.

Conclusion: *BRCA1/2* mutations were identified in four out of 134 previously PTT tested mutation negative families (4/134; 3%). Our findings suggest that TaqMan[®] genotyping assay is a sensitive technique for genetic *BRCA1/2* testing, and can be used for screening recurrent *BRCA1/2* mutations in Pakistan.

148-P

IDENTIFICATION OF ANTI-CANCER POTENTIAL OF DOXAZOCIN: LOADING INTO CHITOSAN BASED BIODEGRADABLE HYDROGELS FOR ON-SITE DELIVERY TO TREAT CERVICAL CANCER

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Abstract:

Purpose: To identify anticancer potential of doxazocin loaded chitosan/Poly- vinylalcohol biodegradable hydrogels for on-site anti-cancer drug delivery.

Objectives: The objective is to inhibit the proliferation of cancerous cells by releasing doxazocin to the selected site. Drug will control the cancer by apoptosis of tumor cells only and later hydrogel will degrade itself without causing any harm.

Materials and methods:

Chitosan /Poly vinyl alcohol crosslinked hydrogels were prepared from freeze gelation method. Triethyl orthoformate (TEOF) was used as crosslinker. Three hydrogels were prepared: 8CLH (8% crosslinker), 4CLH (4% crosslinker) and control (without crosslinker). All of them were subjected to physical loading of doxazocin 1mg/ml. All synthesized hydrogels were subjected to FTIR spectroscopy for structural analysis. SEM was used to characterize the porosity of hydrogels and CAM assay was used to identify anti-angiogenic potential of synthesized hydrogels. MTT assay and flow cytometry analysis was performed to further prove the inhibitory potential of manufactured material.

Results: The 8 CLH showed ability to hold higher amount of doxazocin as compare to non-crosslinked and 4 CLH. FTIR spectroscopy confirmed that drug did not change its chemical structure in composite materials and SEM showed that hydrogels are porous. For assessment of anti-angiogenic potential of the hydrogels CAM assay was used. This test showed that 8CLH loaded with 1 mg/ml of doxazocin was best to inhibit angiogenesis. To further prove the inhibitory potential of 8CLH loaded with 1 mg/ml of drug, we performed MTT assay and flow cytometry analysis. MTT assay displayed that anti-proliferative effect of synthesized hydrogels was directly related to higher amount of cross-linker and drug and declared 8CLH best material to give least %age of viable cells. Flow cytometry analysis was performed to analyse the effect of synthesized hydrogels on cell cycle arrest. 8CLH caused significantly increase in G1 population in cell cycle.

Conclusion: Hydrogel with 8% crosslinker (8CLH) is the most approving hydrogel among all synthesized hydrogels for the onsite delivery of anti-cancer drug (doxazocin) to treat cancer cells. 8CLH will find wide interest in biomedical materials research community for further development and for clinical applications.

149-P

SYNTHESIS AND CHARACTERIZATION OF TAMOXIFEN CONJUGATED ZINCOXIDE NANOPARTICLES AND THEIR THERAPUTIC APPLICATIONS:**MAHNOOR MALIK; NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY, ISLAMABAD, PAKISTAN**

ABSTRACT: Metallic nanocarriers belong to a class of nanocarriers having strong anticancerous activity, by the generation of reactive oxygen species and by the induction of oxidative stress in the targeted cells. In the current study tamoxifen, a chemotherapeutic drug, used for the treatment of breast cancer is conjugated with zinc oxide nanoparticles, coated with a polymer PEG, is delivered to MCF-7 breast cancer cells. ZnO-NPs were synthesized by wet chemical precipitation method using zinc nitrate tetra hydrate and NaOH as precursor. The synthesized particles were then conjugated with tamoxifen drug and further coated with PEG to enhance its therapeutic efficacy, better solubility, and biocompatibility and to increase its retention time. The final product consists of drug tamoxifen loaded on PEG coated zinc oxide nanoparticles (PEG-Tam-ZnONPs) to construct drug loaded nanoparticles as drug delivery system. The morphology and characteristics of the ZnO- NP, Tam-ZnONP's and PEG-Tam-ZnO were investigated by UV, XRD, SEM, EDX and FTIR. Furthermore, the toxicity of ZnONPs,

Tam-ZnONPs, Tam-ZnONPs was evaluated through cell viability, fluorescent microscopy, DPPH, SOD and glutathione assay in human breast cancer cells (MCF-7) and HBL-100 continuous cell line as a control. Also, the hemolytic assay confirmed that the conjugate is comparatively biocompatible and have less hemolytic and clotting activity than tamoxifen when used alone. Cells exposed to PEG-Tam-ZnONPs showed increased reactive oxygen species and hydroxyl radical production when compared to ZnONPs, Tam- ZnONPs. The present findings suggest that PEG-Tam-ZnONPs can contribute to the development of a suitable anticancer drug delivery system in the nearby future.

150-P

THE ASSOCIATION BETWEEN BRCA1 GENE POLYMORPHISM AND BREAST CANCER RISK IN PAKISTANI WOMEN

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Purpose/Objectives: A number of BRCA1 single nucleotide polymorphisms have already been found associated with breast cancer risk. The purpose of this study was to evaluate the relationship between BRCA1 SNPs (rs28897686 and rs28897696) and breast cancer risk in Pakistani females.

Material/Methods: We first identified the potential functional SNPs, reported pathogenic, available from public database and have been confirmed through the HapMap project. These SNPs were genotyped in case-control study including 1000 cases and with an equal number of age matched controls for their allele frequencies and possible association with the disease risk. The genotype frequencies, Odds ratios (OR) and 95% confidence intervals (CI) were calculated using R 3.1.1 statistical computing software.

Results: The polymorphic allele of rs28897686 (G/A, E1250K) polymorphism showed significant association with increased risk of breast cancer in all the genetic models tested, with highest risk in co-dominant model (OR=2.38, 95%CI=1.843.08) while the rs28897696 polymorphism (C/A, A1708E) was found negatively associated with the disease risk.

Conclusion: BRCA1 has been considered globally as a breast cancer risk related gene. Our analysis suggests that rs28897686 polymorphism increases the disease risk in Pakistani women while rs28897696 polymorphism could decrease the risk.

Keywords: Breast cancer, SNP, polymorphism, Association, BRCA1

151-P

NULL POLYMORPHISM OF GSTM1 AND GSTT1 GENES AND ACUTE LYMPHOBLASTIC LEUKEMIA RISK IN ADULTS

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Abstract

Objectives: Glutathione S transferases are primarily involved in detoxification of xenobiotics. Genetic polymorphism resulting in differential expression of *GSTM1* and *GSTT1* may account for inter-individual differences in xenobiotic metabolism. These differences may modify a person's susceptibility to acute lymphoblastic leukemia (ALL) by altering metabolism and elimination of carcinogens from the body. The present study was designed with the aim to investigate the impact of deletion polymorphism in *GSTM1* and *GSTT1* in causing predisposition to adult ALL.

Methods: Sixty six adult ALL patients from Pakistan were included in the current case-control study. The controls were matched with the cases on the basis of age and gender. Genomic DNA was isolated using whole blood samples with standard phenol chloroform protocol. Genotyping was performed using multiplex PCR for identification of null polymorphism in *GSTM1* and *GSTT1* genes. The genotype frequency obtained for cases and controls was compared using odds ratio and chi-square.

Results: The null polymorphism of *GSTM1* was equally prevalent in cases and controls (48 % & 48 %) while deletion of *GSTT1* was observed in 11 % adult cases and 6 % controls. However, this difference in the genotype frequency did not reach statistical significance ($P > 0.05$)

Conclusions: The results reveal that ALL susceptibility among adults is not influenced by homozygous deletion in *GSTM1* and/or *GSTT1* genes. Geographic and ethnic differences have been demonstrated in the distribution of deletion polymorphism of *GSTM1* and *GSTT1*. The findings of this study may hold significance for biomarker identification research and may be extrapolated to progression of ALL and treatment outcomes.

Keywords ALL, Acute Lymphoblastic Leukemia, *GSTM1*, *GSTT1*, Genetic, Polymorphism

152-P

MUTATION ANALYSIS OF PTEN IN PI3K/AKT SIGNALING PATHWAY IN BREAST CANCER PATIENTS.**KHUSH BAKHAT, DR.M.MUSTAFA, FORMAN CHRISTIAN COLLEGE (A CHARTERED UNIVERSITY), LAHORE, PAKISTAN.****Abstract**

Introduction: Breast carcinoma is the most common type of malignancy and leading cause of cancer related deaths in females all over the world. Phosphatase and tensin homolog protein (PTEN) is well known tumor suppressor and located on chromosome 10q23.3. It is dual lipid/protein phosphatase and dephosphorylates acidic substrates. PTEN regulates cell signaling pathways i.e. PI3K/AKT, AMPK, G1/S Checkpoint, Notch pathway. Its primary function is to antagonize PI3K/AKT signaling pathway and dephosphorylate PIP3 into PIP2 which is second messenger of this pathway. Any mutation in PTEN disrupts its functional properties. Exon 5 is the hotspot region of PTEN with 40% mutations.

Objective: Aim of our study was the analysis of genetic integrity of PTEN gene at exon 5 in breast cancer patients and investigates its role in PI3K/AKT signaling pathway.

Materials and Methods: 30 Formalin fixed paraffin embedded (FFPE) breast cancer tissues samples were collected from the histopathology department of Chughtai's lab, Lahore. 25 out of 30 were patients' samples and 5 were control samples from healthy persons. We manually extracted gDNA from FFPE tissue samples and amplified our desired DNA region by PCR and then analyzed our results by Sanger sequencing.

Results: We get fragmented gDNA from FFPE tissues instead of intact gDNA. We found 13 patients out of 30 in which mutations were present in exon 5. Concluded mutations were p. D116E, p. D92V, p. K144R, p. G143C, p. L146fs*2, p. L140*, p. H93Q, p. F104S, p. R130G, p. P103P, p. P96A, p. P103T, p. C105Y. Out of these 69% were missense mutations, 15% silent mutation, 7.7% frameshift and 7.7% nonsense mutation.

Conclusion: We concluded in this study these alterations have huge impact on PTEN expression level, its catalytic activity, protein's stability and downstream signaling pathways. Histopathology reports shows that in these patient's tumor is highly metastatic and of aggressive nature with grade II and III. So we assume mutations in PTEN might be one of the contributing factors for breast cancer in these patients.

153-P

PROMOTER HYPERMETHYLATION OF E-CADHERIN, A CANDIDATE METASTATIC MARKER, IN THE DNA ISOLATED FROM PERIPHERAL BLOOD CELLS OF BREAST CANCER PATIENTS**SANI-E-ZEHRA ZAIDI1*, SALEEMA MEHBOOB ALI1, AISHA SIDDIQA2, MUHAMMAD ALI MEMON2, SADIA AJAZ 1§****MOLECULAR ONCOLOGY (P-035) LAB, DR. PANJAWANI CENTER FOR MOLECULAR MEDICINE AND DRUG RESEARCH (PCMD), INTERNATIONAL CENTER FOR CHEMICAL AND BIOLOGICAL SCIENCES (ICCBS), UNIVERSITY OF KARACHI, KARACHI, PAKISTAN.****ATOMIC ENERGY MEDICAL CENTRE (AEMC), JINNAH POSTGRADUATE MEDICAL CENTRE (JPMC), KARACHI, PAKISTAN.**

E-cadherin is a transmembrane calcium dependent adhesion molecule, which is expressed in all epithelial cell. Loss of function of *E-cadherin* is attributed to epithelial mesenchymal transition. *E-cadherin* being cell adhesion molecule, plays significant role in cancer metastasis. Reduced expression of *E-cadherin* is one of the molecular events in cancer progression. The loss of *E-cadherin* function due to promoter hypermethylation has been reported in different cancers. In the present pilot project, promoter hypermethylation of *E-cadherin* was investigated in DNA isolated from the circulating cells in the peripheral blood of breast cancer patients from Pakistan. 60 samples were collected from the Atomic Energy Medical Center, Jinnah Post-Graduate Medical College, Karachi. DNA was extracted through organic method. Methylation Specific PCR was carried out using bisulphite treated samples. In 53.3% patient, promoter hypermethylation of *E-cadherin* gene was observed. Although, promoter hypermethylation of *E-cadherin* has been reported in DNA isolated from the tissue specimen. To the best of our knowledge this is the first report of *E-cadherin* promoter hypermethylation in cells isolated from the peripheral blood of breast cancer patients.

154-P

ASSOCIATION OF TUMOR PROTEIN (TP53) POLYMORPHISM ARG72PRO (rs1042522) WITH RECESSIVE PRIMARY OPEN-ANGLE GLAUCOMA IN PAKISTANI POPULATION

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Background: Glaucoma, an optic neuropathy is a type of cell death due to apoptosis of the nerve cells that is the cause of irreversible blindness worldwide. The *p53* gene which is known as tumor suppressor gene is one of the regulatory genes of apoptosis. It is perceived that more than half of human cancer cases involve mutated *p53* genes. Normally, the *p53* gene halts mutating cells turning into cancer; but when *p53* is damaged, mutations gather more speedily leading to cancer. There have been inconsistent reports regarding increased risk of Primary Open Angle Glaucoma (POAG) with polymorphism (rs1042522) present in the tumor suppressor gene, *p53* situated in exon 4 in which the C (corresponding to a proline residue) is replaced by G (corresponding to an arginine residue).

Abstract: Aims and objectives: The present study aims to determine the relation between (rs1042522) polymorphism within *p53* and primary open angle glaucoma patients in Pakistani population. This study will help to see the prevalence of Arg/Pro Allele of *p53* in primary open angle glaucoma patients and controls. The objectives of this study are as follows:

Enrollment of affected POAG patients from different hospital of Lahore.

Check the contribution of (rs1042522) polymorphism of *p53* in the etiology of POAG patients and controls in the Pakistani population. Compare allelic frequency of *p53* haplotypes in POAG and control subjects.

Methods: A total of 70 POAG patients (mean age 55 years) and 60 healthy matched controls (mean age 45 years) were enrolled in this study. Patients and control samples were genotyped for *p53* polymorphism rs1042522 (Arg72Pro) by PCR amplification followed by restriction digestion and sequence analysis.

Results: Results of this study showed that there was a difference in allelic frequencies for rs1042522 (Arg72Pro) between POAG patients and control group. For POAG affected individuals arginine frequency is 61.5% whereas for proline it is 38.5%. Whereas in normal control arginine frequency 52.5% and 47.5% for proline amino acid.

Conclusion: From this study it is concluded that individuals who were homozygous for the arginine allele had a significantly increased risk of developing glaucoma as compared to the control cases as this variant has increased apoptotic potential. These findings suggest a potential role for *p53* and apoptosis in Pakistani POAG affected individuals. Such studies are necessary to better understand the molecular basis of POAG and to find early diagnostic markers of POAG development. This will make it possible to develop new therapies addressing the basis of this disease and thus improve the current treatments available. It is necessary to identify the polymorphisms related to glaucoma so that genetic prediction and better diagnosis can be provided to affected persons.

155-P**COOPERATIVITY OF NF-KB (P65) MEDIATED INFLAMMATION WITH P21 IN BREAST CANCER PATIENTS****SIDRA MUMTAZ, ZAEEMA KHAN, GHAZANFAR ABBAS AND NAILA MALKANI
DEPARTMENT OF ZOOLOGY, GC UNIVERSITY, LAHORE, PAKISTAN.**

NF- κ B (Nuclear Factor kappa B) a transcription factor is involved in tumorigenesis, inflammation, autoimmune diseases. p21 has a dual role and acts as apoptotic as well as anti apoptotic factor. In the present study cooperativity of NF- κ B and p21 in breast cancer patient was studied. For this purpose first of all p21 promoter was analyzed using bioinformatics which showed that it has at least two NF- κ B consensus binding sites, Therefore during breast cancer when p53 get inactivated NF- κ B can drive the expression of p21. The expression analysis of p21 and NF- κ B at mRNA level showed that the both get increased during breast cancer when compared to control samples. Moreover H&E staining was done to grade the cancer tissues and the analysis showed that the increased expression of p21 and NF- κ B was directly proportional to severity of the disease. This is a preliminary data that can be utilized to study in detail the cross talk between the two candidates.

156-P

CLEAR CELL SARCOMA OF KIDNEY IN A PEDIATRIC PATIENT- A CASE REPORT

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Abstract

Background: Clear cell sarcoma of kidney is a rare pediatric renal tumor. Its diagnosis is challenging for a clinician and radiologist due to its overlapping clinical and radiological presentation with much common Wilm's tumor.

Case report: We will be presenting a case report of 2-year-old boy presented with abdominal discomfort and lumbar region mass for 2 months. The patient underwent routine work up including CT abdomen which demonstrated a mass arising from renal medulla crossing midline. Image guided biopsy followed by histopathology confirmed it as clear cell sarcoma rather than Wilm's tumor. Metastatic work up remained negative for distant lesions. He underwent neoadjuvant chemotherapy regimen followed by surgical resection with no immediate or long-term complications.

Conclusion: Accurate diagnosis of clear cell sarcoma of kidney is crucial and challenging in pediatric age group. Imaging and histopathology play vital role in narrowing down differentials and prompt diagnosis.

157-P

Role of breast MRI in diagnosis of breast lesions in pregnant and lactating females in comparison to ultrasound and mammography

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Background: Pregnancy and lactation associated breast cancer is a challenging diagnosis for clinicians as well as radiologists. Ultrasound and mammography remain the initial diagnostic imaging modalities to look for possible suspicious lesions and microcalcifications in such patients. MRI breast is emerging due to its frequent availability now a days to diagnose and predict possibility of malignancy in breast lesions in young pregnant and lactating females being radiation free.

Objective: The aim of our study is to look for sensitivity and accuracy of MRI breast in initial diagnosis of breast lesions in pregnant and lactating females in comparison to common modalities.

Materials and Methods: The study will be conducted in six months on pregnant and lactating females with suspicion of breast cancer presenting in one stop clinic in Shaukat Khanum Memorial Cancer Hospital. Age, features of breast lesion on ultrasound or mammography, histology type in case of biopsy and MRI breast post processing features with time activity curve will be studied and data will be collected on SPSS.

Conclusion: Considering MRI breast being radiation free and new technique, sensitivity in comparison to ultrasound and mammography in pregnant and lactating females with breast lesions can be studied. If proven more sensitive, MRI breast can be used in initial diagnosis of breast lesions with considerable accuracy.

158-P

INHIBITION OF NF- κ B AND COX-2 BY LIRIORESINOL B DIMETHYL ETHER IN DEN INDUCED HEPATIC FIBROSIS MOUSE MODEL**SHAGUFTA REHMAT, ADEEB SHEHZAD*****DEPARTMENT OF BIOMEDICAL ENGINEERING AND SCIENCES, SMME, NUST, ISLAMABAD, PAKISTAN**

Hepatic fibrosis is the leading cause of mortality around the world, associated with HCC. To overcome this, novel therapeutic agents exhibiting comprehensive effects in treatment of chronic hepatitis and prevention of liver cirrhosis is required. Lirioresinol B Dimethyl ether (LBDE) is a bioactive phytochemical obtained from seed oil of *Magnolia Fargesii*. In the current study, we have investigated the effect of LBDE in diethyl nitrosamine (DEN) and carbon tetra chloride (CCl₄)-induced hepatic fibrosis model of Balb/c mice. The histopathological examination revealed that LBDE treatment reduced inflammation-induced hepatic fibrosis. Furthermore, the serum levels of alanine aminotransferase (ALT), alkaline phosphatase (ALP) were increased in the DEN/CCl₄ model group as compared to control and treated group. LBDE treatment showed a significant decrease in the lipid peroxidation as shown by the decrease concentration of malondialdehyde. Increased level of antioxidants such as Glutathione and Superoxide Dismutase in liver by LBDE indicated the healing of hepatocytes as compare to DEN/CCL₄ group. The immunoblot study revealed that LBDE inhibited COX-2 and NF κ B at transcriptional and translational level. These preliminary results indicate the LBDE has the potential to screen further for various hepatic diseases including HCC.

159-P

TO EVALUATE THE DISTRIBUTION OF TUMOR GRADES IN DIFFERENT HORMONAL RECEPTOR STATUS (ER, PR & HER-2/NEU) CATEGORIES AMONG BREAST CANCER WOMEN :A SINGLE INSTITUTION EXPERIENCE

M EJAZ KHAN; JINNAH POSTGRADUATE MEDICAL CENTRE, KARACHI, PAKISTAN

ABSTRACT (For Oral / Poster Presentation)

Objectives: To evaluate the distribution of tumor grades in different Hormonal Receptor Status (Estrogen, Progesterone and Her-2/neu receptors) categories among Breast Cancer Women.

Materials & Methods: The study included 453 patients from 1st June 2017 to 31st July 2018 at oncology ward JPMC Karachi. Hormonal Receptor Status (HRS) was resolved into 9 different categories as i) ER+, ii) PR+, iii) Her-2/neu+, iv) ER+PR+, v) ER-PR-, vi) ER+PR-, vii) ER-PR+, viii) Triple Positive, and ix) Triple Negative. Out of 453 patients, only 3 patients came out to be positive for tumor grade 1, who were not included in the final calculations due to statistical test limitation so the overall analysis done upon 450 patients. Data was analysed in SPSS version 20 using the Chi-Square Test to see statistical significance between the tumor grades and HRS categories.

Results: The mean age of patient was 46.57 years. Overall HRS showed ER+ 61.30% (276), PR+ 53.30% (240), Her-2/neu+ 33.10% (149), ER+PR+ 50.70% (228), ER-PR- 36% (162), ER+PR- 10.70% (48), ER-PR+ 2.70% (12), Triple Positive 14.2% (64) and Triple Negative 20.90% (94). Similarly overall grade 2 and 3 tumors were 53.30% (240) and 46.70% (210) respectively. The distribution of these 2 grades of tumor in the 9 different HRS categories revealed that: In the ER+ category, distribution of grade 2 and 3 tumors were 62.3% (172) and 37.7% (104) respectively ($P < 0.001$). In the PR+ category, grade 2 and 3 tumors were 60.4% (145) and 39.65% (95) ($P < 0.05$). Similarly the remaining 7 categories were analyzed and P values identified.

Conclusion: Significant co-relations ($P < 0.05$) were observed in 5 HRS categories. We observed a very low frequency (less than 1%) of grade 1 tumor in our study. The least number of patients were noted in the category ER-PR+ (12 out of 450) consistent with the literature. In short such studies may be a source of facts and figures of our local demographics which may help us compare our data to the rest of the world and be able to find the reasons for the differences in the tumor behavior between our patients and rest of the world.

160-P

EVALUATING THE SIGNIFICANCE OF TUMOR-INFILTRATING LYMPHOCYTES (TILS) IN COLORECTAL CANCER.**FAYAZ HUSSIAN MANGI¹, BINA FSHA MANZOOR SYED², JAWAID NAEEM QURESHI³, IKRAM UD DIN UJJAN⁴.****1NUCLEAR INSTITUTE OF MEDICINE AND RADIOTHERAPY JAMSHORO, 2MEDICAL RESEARCH CENTRE, LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, JAMSHORO, INDUS MEDICAL COLLEGE, TANDO MOHAMMAD KHAN, 4 DEPARTMENT OF PATHOLOGY, LIAQUAT UNIVERSITY OF MEDICAL & HEALTH SCIENCES, JAMSHORO, PAKISTAN**

Background: Tumor-infiltrating lymphocytes (TILs) reflect the antitumor immunity of the host and correlate with the therapeutic outcomes and survival. Nowadays TILs are attracting attention as new biomarkers associated with disease progression. Therefore Tumor-infiltrating lymphocytes (TILs) were evaluated in colorectal cancers to assess their association with demographic and pathological characteristics.

Material & Methods: During the period of last three years (Jan. 2014 to December. 2016), prospectively collected tumour specimens from institutional archive of department of Pathology LUMHS Jamshoro, good quality tumor blocks of 53 cases of biopsy proven colorectal cancer (CRC) were assessed on H&E. The lymphocyte infiltration and their histological grades are presented here.

Results: Out of 53 patients, 66.7% were under the age of 50 years and 33.3% were above 50 years. Lymphocyte infiltration was seen in 47/53 88.6% Patients (mild 23/53 43.3% moderate 16/53 30.1% severe 8/53 15%). The histological grade were high in (12/53)22.6 % while (16+25/53) 77.4 % had low grade II & I. The low histological was associated with more lymphocytic infiltration (grade I and II 58.8% versus grade III 38.9%).

Conclusion: Tumor-infiltrating lymphocytes might be a useful predictive factor in colorectal cancer patients and can potentially open up new era of intra-tumoral immunity for cancer treatment.

161-P**INTERACTION BETWEEN NEUROLOGICAL DISORDER AND CANCER****MUSAWIRA IFTIKHAR; NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY, ISLAMABAD, PAKISTAN**

Neuro degenerative, progressive disease affecting the basal ganglia. Parkinson's disease affects the nerve cells in the brain that produce dopamine. Release of dopamine is associated with alpha-synuclein, Alpha-synuclein is a protein that is abundant in the human brain. Parkinson's is associated with voluntary motor control, procedural learning, eye movements, cognitive and emotional functions. Cancer being the uncontrolled cell division is caused by mutation in the genes. Skin cancer is the over growth of skin cells. There are three types of skin cancer basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and melanoma. A growing number of evidences suggest that people with Parkinson's disease (PD) have a decreased risk of almost all cancers. However, the incidence of skin cancer is strikingly higher in patients with PD than that in general population. An association between Parkinson disease (PD) and cancer has long been suspected, but whether the association is with the dopaminergic treatments or with the disease itself remains a question.

So for this study four groups of mice are studied one being the control or healthy mice second group of skin cancer third group is subjected to Parkinson's disease and fourth group have both the skin cancer and Parkinson's disease and at the end of samples are collected and different assays should be performed to biochemically analyse the samples.

162-P

ACUTE TOXICITIES OF ¹⁷⁷LU PRRT/PSMA IN PATIENTS WITH PROSTATE AND NEUROENDCRINE TUMORS

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INMOL CANCER HOSPITAL, NEW CAMPUS ROAD, LAHORE, PAKISTAN

Objective: The study aimed to evaluate the efficacy of treatment in terms of symptom evaluation and acute toxicities using ¹⁷⁷Lu-PRRT/PSMA in patients with advanced neuroendocrine Tumors (NETs) and Prostate cancer.

Methods: ¹⁷⁷Lu-PRRT/PSMA based therapies were administered to 7 patients including 4 NETs and 3 with prostate cancer during February – July 2018. Four patients received single cycle of ¹⁷⁷Lu-PRRT/PSMA depending upon the neoplasm involved with administered activity of 7 GBq ($30 \pm$ mCi) and three received 2 cycles during the period under report. Pretreatment evaluation was made with ⁶⁸Ga-DOTANOC PET-CT or ⁶⁸Ga-PSMA administered intravenously. Imaging of skull to mid-thighs was acquired at 50-60 minutes interval following ⁶⁸Ga-DOTANOC/PSMA administrations. PET imaging was preceded by low dose CT (with IV contrast) for AC/AL. Renal and hematological toxicities were investigated. Renal toxicities were measured using serum markers including serum Creatinine and Blood Urea Nitrogen (BUN). Estimated GFR was calculated and compared before and after treatment. Hematological parameters included Hemoglobin, Platelet counts and WBCs pre and post-treatment were also compared for all treated patients.

Results: ¹⁷⁷Lu-PRRT/PSMA based therapy was well tolerated with no remarkable side effect observed. No hospitalization beyond radiation safety measures or blood transfusions were required after treatment. Mean changes in serological and hematological markers before and after treatment were calculated. Mean difference in pre and post treatment Hb levels was $-0.180 \text{ g/dL} \pm 0.66$, mean decrease in WBCs was $0.998 \times 10^3 \pm 0.66$ and in Platelet count difference was $-4.40 \times 10^3/\text{uL} \pm 33.41$. Mean rise in serum creatinine was only $0.11 \text{ mg/dl} \pm 0.25$. Mean decrease in EGFR was $5.21 \pm 3.47 \text{ mL/min/1.73/m}^2$.

Conclusion: ¹⁷⁷Lu-PRRT/PSMA was found safe in patients with neuroendocrine tumors and prostate cancer. No reportable acute toxicities were observed following treatment.

163-P

HYBRID SCINTIGRAPHY OF RARE SPLENIC HAMARTOMA

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Background: Splenic hamartoma is also known as splenoma, splenic adenoma or nodular hyperplasia, first described by Rokitansky in 1861. It is a rare benign tumor composed of disorganized vascular proliferation with aberrant mixture of red or white splenic pulp. Mostly it is asymptomatic and encountered incidentally at imaging, surgery or autopsy. Fewer cases have been described in the literature with an incidence of 0.13% on autopsy. Radiological features of hamartoma are virtually identical to hemangioma. In such circumstances radionuclide imaging helps to differentiate the two entities. Imaging features may suggest the diagnosis, however final diagnosis must be confirmed on histology.

Case presentation: We present a 27 year-old man came up with a large 5 cm splenic lesion on ultrasound abdomen while investigating for deranged liver function tests. The mass appeared solid, slightly hyperechoic with sharp borders on ultrasound. Contrast enhanced CT scan showed isodense splenic lesion along with a smaller lesion in the liver. Patient was referred to our department for suspected hemangioma. RBC Tc99m-labeled scan demonstrated reduced blood pool activity within the enlarged splenic lesion as compared to the normal splenic parenchyma on SPECT-CT. However, Tc99m tin-colloid scintigraphy displayed intense focal tracer uptake in the spleen corresponding to the enlarged splenic lesion on SPECT-CT, making the diagnosis of possible splenic hamartoma. Patient was managed conservatively without any surgical treatment.

Conclusion: Various benign or malignant pathologies can involve spleen. Splenic hamartoma should be kept in the differentials of solitary splenic lesions in the absence of any malignancy. Radio-colloid scintigraphy with SPECT-CT helps to establish the diagnosis feasible describing the function of reticuloendothelial system.

Key Words: Splenic hamartoma, SPECT-CT, Radio-colloid scintigraphy.

164-P

TITLE: ANALYTICAL REVIEW HIGHLIGHTING THE SIGNIFICANCE OF CHROMATOGRAPHIC TECHNIQUES APPLIED BY CENTRAL RADIOPHARMACY, NUCLEAR MEDICINE DEPARTMENT SKMCH & RC LAHORE**AUTHOR: M. REHAN GUL, DR. HUMAYUN BASHIR, BASHIR AHMED, M. MANAN BHATTI, DEPARTMENT OF NUCLEAR MEDICINE, SHAUKAT KHANUM MEMORIAL CANCER HOSPITAL AND RESEARCH CENTRE, LAHORE, PAKISTAN.**

Background: Chromatography is an analytical chemistry procedure utilized for segregating chemical mixtures into its individual distinct components. From the simple instant TLC analysis of twelve technetium-99 labelled radiopharmaceuticals to the advanced HPLC and Gas chromatography analysis of PET tracers (F-18 FDG), a rational decision of acceptance or rejection of radiotracer based on radiochemical purity (R.C.P) is adjudged by the chromatographic results.

Method: In the current study, 3000 quality control procedures involving chromatography have been scrutinized via comprehensive statistical tool application in the selected data set from January 2017 to August 2018, on the variety of radionuclide tracers dispensed.

Results: Dispensed radiotracers qualified on the quality control standards defined by compendia (U.S.P , B.P, E.P and W.H.O International pharmacopeia) and manufacturing practices complied with IAEA, EANM, FNCA, FDA, ISO GMP guidelines with the mean of >97.0% R.C.P. achieved among 3000 quality control tests. Imaging results conform to the IAEA/ EANM reporting standards >98.0% in the 24 months data under scrutiny. Standard deviation in all chromatographic results and imaging is less than 0.5% which implies the quality radiotracer administered and its positive impact confirmed by the good quality diagnostic imaging scans with minimum image artifacts.

Conclusion: In this review, we have reflected upon the prominence and significance of application quality control tests via chromatography in nuclear medicine. The existing and novel measures for advanced chromatography have been argued and assessed in the view of the future needs and modern trends in this important area of research and applied quality control.

165-P**MOLECULAR AND GENETIC LEVEL ANALYSIS OF BREAST CANCER WITH DIABETES MELLITUS**

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Breast cancer is regarded as a common health problem, worldwide. It is regarded as most common type of malignancy due to 1.67 million new cases and 522,000 deaths, overall. It is the problem of both developed and developing countries. The rate of breast cancer is increasing in less developed countries than United states and other developed Western countries because of unhealthy western lifestyle adopted by Asian women. Pakistan, as a developing country, is having very high incidence rates of breast cancer with 1 case among every nine women. This burden is 2.5 times high in Pakistan than its neighboring countries including India and Iran, appearing to be highest in Asia. Several environmental and genetic factors are involved in the occurrence of breast cancer. These factors include the BMI, age at first birth, age at menopause, breast feeding, hormonal status, family history, Ethnicity, smoking and alcohol consumption, unhealthy diet etc. A wealth of epidemiological data has found that patients with type 2 diabetes have a greater risk of developing breast cancer. The molecular mechanisms underpinning this relationship are yet to be elucidated, however metabolic abnormalities observed in type 2 diabetes can predispose to the development of breast cancer. Other than these factors, many genes are also involved in the occurrence of the disease. A huge number of researches and scientific literature has reported the positive association of many variants, mutations and haplotypes with the occurrence of the disease. There is still a need to enhance the research approaches to identify many new treatments and cure of the disease and advancements in the available treatment strategies.

166-P

BONY MANIFESTATIONS OF THE LANGERHANS CELL HISTIOCYTOSIS: A PICTORIAL REVIEW

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Introduction: Langerhans cell histiocytosis (LCH) describes a group of syndromes that share the common pathologic feature of infiltration of involved tissues by Langerhans cells. Bony manifestations of Langerhans cell histiocytosis (LCH) are underestimated in frequency and diversity. Osseous involvement is typically in the flat bones, with lesions of the skull, pelvis, and ribs accounting for more than half of all lesions. About 30% of lesions are seen in long bones.

Objective: The purpose of this study was to review the radiologic bony manifestations of patients diagnosed with Langerhans cell histiocytosis (LCH). This study will also compare the frequency of the various manifestations found in our patients with those reported in the medical literature.

Conclusion: In LCH, involvement of the calvaria, skull base, maxillofacial bones and ribs is fairly common. Sixty percent of our patients had a solitary bone abnormality, and 40% of the patients had multiple lesions. By far, the most common bone involved in the series was the skull, affecting 54 percent of the total patients. Thus this data is comparable to that reported in the literature.

167-P

SIMULTANEOUS INTEGRATED BOOST (SIB)-IMRT TECHNIQUE IN HEAD AND NECK CANCER, REPORT OF THE FIRST PATIENT PLANNED AT ZIAUDDIN HOSPITAL

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Introduction: Simultaneous Integrated Boost (S.I.B.) Intensity Modulated Radiation Therapy (IMRT) is a promising new technique used nowadays for different dose levels and conformity. It also limits the dose in critical structures like spinal cord. In this paper we present the first case planned at Radiotherapy department, Ziauddin Hospital Karachi.

Case Presentation: The first case planned with SIB-IMRT at Radiotherapy department, Dr. Ziauddin Hospital, Karachi was a 10 years old boy referred by the Pediatric Oncology service for Radiation Therapy. This patient was a known case of Squamous cell carcinoma of left buccal mucosa and underwent surgery wide local excision and left neck dissection on 4th October 2016. He had $pT_4 pN_1 M_x$ disease and Radiation Therapy was planned. Planning CT was done and DICOM images of 3 mm were transferred to Varian Eclipse™ Treatment Planning System. It was decided to plan this patient with IMRT SIB technique with different dose levels and limiting the dose to the spinal cord. Contouring was done with dose levels, Left side of the cheek was drawn to CTV_66 Gy high risk area, right side of the cheek was contoured to CTV_50Gy, low risk area, Left neck nodes were contoured with CTV(N)_60Gy and right neck nodes with CTV(N)_50Gy. Organ at risk were also contoured. Planning was done by physicist, keeping in mind the planned doses as contoured. SIB-IMRT plan was made and was forwarded to the treatment machine.

Discussion: Mohan et al. first proposed the concept of SIB-IMRT in the year 2000. SIB-IMRT gives the advantage of better target conformity with less dose spillage in critical organs. At the same time, it allows delivery of a higher dose of radiation to smaller sub-volumes in the target in a shorter period of time. Control rates in contemporary IMRT series using SIB-IMRT have been uniformly good. This is the first case who was planned with SIB-IMRT at Ziauddin Hospital, Karachi. The patient tolerated the treatment well but he developed a right neck node during radiation therapy so later on dose rate to the right side low risk area was increased and was hypo-fractionated. This also gives us the idea that head and neck cancer in our city is very aggressive and should be treated aggressively.

168-P

ETS PROTEINS SIGNIFICANCE IN BREAST CANCER PROGRESSION: A META-ANALYSIS**SIDRA ARSHAD; GOVERNMENT COLLEGE UNIVERSITY LAHORE, LAHORE, PAKISTAN**

Background: Ets transcription factor family is found to be activated in many cellular events leading to carcinogenesis, numerous studies have identified members of Ets transcription factors family showing aberrant expression in various stages of tumor formation and growth. However their use as prognostic factor is not very clear. Therefore a metaanalysis was performed to analyze Ets family involvement in tumorigenesis.

Materials and methods: A thorough systematic search was performed on Google scholar, PubMed and relevant studies were identified and scrutinized. A random effect model was applied and the correlation was calculated using odd ratios at 95% confidence intervals.

Results: A total of 26 studies covering 4553 subjects were included for metaanalysis. Odd ratios (OR) were calculated for all studies at 95% confidence interval (CI). The combined OR calculated showed a significant relation between Ets factor expression and breast cancer risk (OR = 3.185, 95% CI = 2.161 – 4.69, $P < 0.001$). in subgroup analysis Ets-1 factor over expression was observed highly associated with breast cancer risk (OR = 2.149, 95% CI = 1.141 – 4.048, $P = 0.018$). Publication bias was checked by funnel plots and there was observed no bias in the study.

Conclusions: Our study suggested that the Ets over expression (especially Ets-1) might indicate high risk of breast cancer. However, to make a conclusive statement further investigations and clinical trials are needed to confirm the diagnostic value of Ets factors in breast cancer.

Keywords: Meta-analysis; Ets transcription factors; Ets-1, Breast cancer

169-P

DETECTION OF COMPLEX VARIANT T(9;22) CHROMOSOME TRANSLOCATIONS IN NEWLY DIAGNOSED CASES OF CHRONIC MYELOID LEUKEMIA**NOORULAIN FAREED, NOOR MUHAMMAD SOMROO, SAEED QURESHI
ONCOLOGY DEPARTMENT, DR. RUTH K. M. PFAU, CIVIL HOSPITAL KARACHI**

Introduction: Chronic myeloid leukemia (CML) is a stem cell clonal disease characterized by the acquisition of a fusion protein, BCR-ABL1 oncogene, which leads to uncontrolled proliferation of myeloid elements in all stages of differentiation. The fusion gene is the result of reciprocal translocation (9;22)(q34;q11) known as Philadelphia (Ph) chromosome. However, a small proportion of patients with CML have simple or complex variants of this translocation, involving various breakpoints in addition to 9q34 and 22q11.

Objective/Rationale: This study detect the complex variants of t(9;22) in newly diagnosed patients of Chronic Myeloid Leukaemia in public sector hospital.

Study Design: Cross sectional observational study.

Setting: This study was conducted for a time period of 06 years from 2011 to 2017 at Civil Hospital Karachi.

Material& Methods: Our study was carried out in the department of Oncology/ hematology of the Dr. Ruth K. M. Pfau, civil hospital karachi . It was retrospective and descriptive. It involved records of in-patients or out-patients from 2011 to 2017. All in-patients or out-patients with CML diagnosed by blood count, Bone marrow biopsy, and cytogenetic or molecular biology with additional chromosomal abnormality were included. Of them, Seven patients (7.9%) showed variant Ph translocations involving chromosomes 1,2, 3, 5, 11, 15, or X.

Results: In 88 patients with Philadelphia-positive CML , 07(7.9%) (age, 42 years) . Nine cases had variant translocations prior to starting imitinib. The group of Nine patients consisted of 2 females and 7 males, ranging in age at diagnosis from 21 to 83 years. All the patients were in chronic phase at presentation and were treated accordingly to what was considered the standard treatment in each moment receiving hydroxyurea and imatinib.

Conclusion: In our study 07 patients had complex variants of t(9;22).The presence of these complex variants at diagnosis and during the TKI treatment may announce treatment failure and/ or transformation to advanced stage (accelerated or blast). Early identification of these abnormalities may help in choosing therapy modalities.

Keywords: Chronic myeloid leukemia, ,Complex Variant t(9;22), imatinib.

170-P

FREQUENCY OF P53 GENE EXPRESSION AND ITS CORRELATION WITH OVERALL SURVIVAL IN GLIOBLASTOMA PATIENTS OF PAKISTAN**K. Mehnaz, S.M.A. Adnan, E. Ather; Aga Khan University Hospital., Karachi, Pakistan****Abstract:**

Background: Glioblastoma (GBM) is the IV grade brain tumor and is characterized by its aggressive behavior. Despite of advances in current GBM therapies still it has very poor prognosis with average survival of 15 months after diagnosis. The role of p53 has been widely studied and correlated with prognosis, metastasis and patients overall and disease free survival in different types of cancers and prevalence of p53 is high in GBM. The objectives of this study are to check the expression patterns of p53 by immunohistochemistry & correlate its expression with overall survival in GBM patients.

Material & Methods: A total of 101 Formalin Fixed Paraffin Embedded (FFPE) sections of Patients diagnosed with GBM at Aga Khan Hospital from January 2015–December 2015 were recruited and immunohistochemistry was performed according to published article.

Results: P53 expression was positive for 39 patients out of 100 (38.6%). Out of these 10 were mild, 18 were moderately stained and 11 were strongly stained. The overall mean survival was 10.3 (CI=95%, P=0.223) whereas the patients with no p53 expression survived 11.56 months and with positive expression survived for 8.1 months.

Conclusion: P53 expression was found to be prevalent in GBM patients whereas no significant correlation was found in p53 positive and overall survival of the patients.

171-P

CYTOSTATIC EFFECTS AND ASSOCIATED SIGNALLING CASCADES REGULATED BY A RIBOSOME INACTIVATING PLANT PROTEIN “RIPROXIMIN” IN BREAST CANCER CELLS

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Purpose/Objective: Riproximin is a class II ribosome inactivating protein with significant potential to inhibit translation irreversibly in target eukaryotic cells. This plant protein, extracted from *Ximenia Americana*, showed significant anti-neoplastic effects against variety of cancer cell lines. Purpose of this study was to investigate cytostatic effects and expressional modulations in cell cycle relevant genes imposed by riproximin in breast cancer cells.

Materials and Methods: Breast cancer cells (MDA-MB-231 and MCF-7) were exposed to various concentrations of riproximin and distribution of the cells in different phases of the cell cycle was determined by flow cytometry analysis. Afterwards, MDA-MB-231 cells were exposed to riproximin in a separate experiment and expressional modulations in 84 cell cycle relevant genes were determined by a real-time PCR based ready-made panel. Significant alterations in expressional levels of the genes (≥ 2 fold) were used to design a signalling cascade with the help of *Ingenuity Pathway Analysis* software.

Results: Exposure with riproximin induced significant arrest in S phase of the cell cycle. Noteworthy alterations (≥ 2 fold) were found in 49/84 (58%) of the cell cycle relevant genes incorporated in the ready-made panel. Significantly altered genes belong to various groups like cyclins (CCNA2, CCNC, CCND1, CCND2, CCND3, CCNF, CCNG1, CCNG2, CCNH), their target kinases (CDK6, CDK7), transcription factors (E2F1, TFDP1, TFDP2), inhibitors (CDKN1A, 2A), regulators (CHEK1, MAD211, MAD2L2, RAD1, RBL1, RBL2) and facilitators of the cell cycle (MCM2, MCM3, MCM4, MCM5). Expressional profiling of the selected genes, after a concentration dependant exposure, indicated that riproximin can induce cytostatic changes in breast cancer cells with different molecular sub-types (Triple negative MDA-MB-231/Basal and ER/PR positive MCF-7/Luminal A).

Conclusion: Riproximin is a significant cytostatic agent and induces major halt in S phase of the cell cycle in breast cancer cells. Remarkable alterations in various cell cycle relevant genes are imposed by riproximin in selected cells. The compound could be an effective cytostatic agent against basal and luminal A types of breast cancers, while therapeutic potential against other molecular sub-types of breast cancer cannot be ruled out.

172-P

CHIMERIC ANTIGEN RECEPTOR (CAR) T-CELL THERAPY; A BEACON OF HOPE IN FIGHT AGAINST CANCER

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Objective/Background: Radiotherapy and chemotherapy is a mainstay for treating cancer. Despite significant advancement relapses and persistent malignancies are still a challenge in oncology. Monumental developments in immuno-oncology in the 21st century have revolutionized the treatment of cancers. Immunotherapy has shown a remarkable potential in induction of sustained remission in case of refractory malignancies.

Methods: A comprehensive, in depth literature search was made on Google Scholar, PubMed using keywords "Chimeric antigen receptor T cell therapy" and "CAR-T" cell. No time limit was imposed.

Results: Chimeric antigen receptor T cells (CAR-T) therapy is a relatively new treatment methodology approved by the Food and Drug Administration (FDA), they are a class of genetically engineered T cells each CAR T cell has the ability to kill numerous tumor cells by antigen release and promoting the lymphocytes to kill them. The chimeric pairing of an antigen receptor with the T-cell receptor (TCR) intracellular signaling domain allows CD8 cytotoxic T-cells to target cell surface makers independent of major histocompatibility complex (MHC) activation. Another essential feature which contributes to the broad applicability of CARs and expanding their potential targets is their ability to bind not only to proteins but also to carbohydrate and glycolipid structures Their antigen specific and targeted immune response has shown huge promise in clinical trials particularly involving B cell malignancies and motivating results in cases of solid tumors. High remission rates and low percentages of relapse have caused a paradigm shift in treatment of relapsed or refractory cancers. Challenges include side effects such as Cytokine release syndrome, off tumor-on target toxicities and replication of its success in treating solid tumors.

Conclusion: CAR T cell therapy has a great therapeutic potential. Years of hard work and clinical trials have translated into clinical success in terms of high remission rates. Despite the therapeutic potential it has shown, the burden of side effects and a hefty cost of treatment are major obstacles which could hinder its progress globally. Nevertheless, ongoing research would only result in a maximized therapeutic potential in addition to more patient and cost friendly treatment

173-P

IDENTIFICATION OF INHIBITOR AGAINST METASTATIC BREAST CANER USING DRUG AIDED DRUG DESIGNING (CADD)

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Abstract: Breast Cancer is more common in Pakistani population as compared to Western countries. Invasive lobular and Ductal were accounted as 6.72 % and 75 % respectively with n=446 as predicted through statistical studies conducted by NUMPS Rawalpindi Pakistan. Angiogenesis is required for invasive tumor growth and metastases and constitute an important role in control of cancer advancement. Its inhibition may prove valuable in cancer therapy. Thymidine phosphorylase (TP) reported as most potent mediator of Metastatic Breast Cancer (MBC) and enzymatic activity of TP is mandatory for the angiogenic effect of TP. Most of FDA approved drugs for BC, targeting Estrogen receptors, Her2 and Kinase family. So through this study potent compound against TP might be used in Drugs targeting MBC. Allosteric site of TP is site other than active site was identified by using online tool. For this, a dataset of about 150 inhibitors considered by using different databases as DrugBank and Binding database along with literature cited inhibitor also took into consideration. After the selection of inhibitors, docking was performed using AutoDock Vina and top molecules were selected by considering their energy values, rms values and binding affinities etc and that were used to create pharmacophore by using Ligandscout 4.0. Then the pharmacophore screened against ZINC LEAD library of about 26,000 molecules. About 500 hits were generated and among them top 10 were selected based upon different criteria and all were following lead compound criteria as ADMET properties, Lipinski rule and druglikeness. The molecule with Zinc ID 156947 with 301 molecular weight, 9 and 4 hydrogen acceptors and donors respectively and follows the druglikeness properties, was proved to be more effective as it can bind more effectively at allosteric site of TP and appeared as most potent inhibitor targeting TP.

Key Words: Thymidine Phosphorylase, Pharmacophore and Metastatic Breast Cancer.

174-P

TOTAL PAIN: A DIVERSE EXPERIENCE AT THE END OF LIFE BY CANCER PATIENTS**NASIR KHAN,
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Purpose/Objectives: The concept of pain is mismatch with only physical existence in, and its management in terms of assessment, planning, managing and evaluation become complex at the end of life care. “Total Pain” is a broader concept where all contributing factors can be addressed and managed appropriately to alleviate patient’s suffering. This poster is highlighting the key factors associated with “Total Pain” & suggest as how to manage those.

Material/methods: Exploratory descriptive study was done and different studies for the subject were retrieved from Pub-Med, Ovid, Science Direct, and Mosby Nursing. Analysis & Results Pain is not simply a physical experience; it is the sum of the physical and patient's interpretation of their experience. Theoretical concept of “total pain” is well accepted in the palliative care literature. Dam Cecily first had used the term “Total pain” to describe the physical, mental, social and spiritual components to distress and suffering among dying patients. There is a challenge for all health care professionals in ruling out the psychological, social, and spiritual components and the goal of effective management for “total pain” is one of the biggest challenges for nurses in Palliative & Oncology. Even anesthesiologists who are exclusively qualified in pain management their role is not visible in many healthcare institutions. Understanding of pain necessarily includes an assessment of all the factors that contribute to the patient’s experience and not solely the under lying physical trigger. When it comes to “total pain” the process of dealing it became more complex; because of additional contributing factors i.e. psychological, social, and spiritual concerns. Contributing factors for “total pain” is individually addressed in literature and in different theories. Palliative pain management specialists can best assess where transition of roles can be switched to other specialties for helping the patient. On emerging issue of “total pain” in Pakistan there is no evidence of any study. When talks about pain of its physical origin, it is treated by every physician according to their own ways in Pakistan.

Conclusion: For clinical practices Total pain is one of the leading causes of “suffering” among dying patients. Early identification and access to available resources can help dying patients in managing their suffering. Multi-disciplinary where palliative team along with oncologists, pharmacy, nursing, psychologists & psychiatrists, sociologists, religious persons, and other counselors can contribute in alleviating patient’s “total pain”.

175-P

CRITICAL THINKING ENHANCEMENT IN NURSING STUDENTS

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Background: Critical thinking is a key element in the field of education. Where many studies have been published regarding the importance of critical thinking while practicing or studying nursing in hospital settings or academic environment, this project indicates the development of critical thinking in nursing students at all levels of their nursing program.

Objective: The purpose of the study is to enhance critical thinking in the nursing students to improve clinical practice and judgment.

Methodology: A sample of 20 nursing students participated. A questionnaire tool regarding Knowledge, Attitude and Practice of nursing student to enhance critical thinking was used for pre and post-test evaluation. In implementation phase, participants presented with different critical thinking skill development presentations which were based on clinical scenarios.

Results: The result analyzed was 18 out 20 participants strongly agreed that critical thinking development workshop enhanced the skill in patient care. The critical thinking assessment too was further assessed over the time period for their consistency and sustainability on utilizing the critical thinking strategy.

Conclusion: The enhancement in critical thinking in nursing students is a necessary development in one's ability ultimately improving patient care outcomes and quality indicators.

176-P

FREQUENCY OF FUNGAL INFECTIONS IN PEDIATRIC PATIENTS WITH ACUTE LYMPHOBLASTIC LEUKEMIA WHILE ON INDUCTION CHEMOTHERAPY

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Abstract:

Background: Acute Lymphoblastic Leukemia (ALL) is one of the most common hematological malignancies seen in children. Despite steadily improving long-term outcomes, infections remain a major cause of morbidity and mortality in children receiving therapy for leukemia. In some settings, IFIs caused by molds are more frequent than those caused by yeasts, and *Aspergillus* spp. is the most common pathogens. The aim of the study was to determine the frequency, type of fungal infection seen during induction chemotherapy and outcomes.

Methods: Observational retrospective study done on patients registered in pediatric oncology department at Shaukat Khanum Cancer Hospital Lahore from January 2015 to December 2016 after taking IRB approval. All the patients aged 1-15 who were diagnosed with acute lymphoblastic leukemia while on Induction chemotherapy were included. The data was retrieved of 165 patients from the hospital database.

Results: The mean age of the patients was 4.6 ± 2.80 with range 1-15 years. Total 154 (93%) of the children were of age between 1 to 5 years whereas only 11 (6.7%) were between 5 to 10 years. Male sex was predominant in 117 (70.9%) and 48 (29.1%) were girls. Pre B Acute lymphoblastic leukemia was diagnosed in 93.3% of the patients and rest 11 (6.7%) were diagnosed with Pre T Acute lymphoblastic leukemia. NCI Standard risk patients were 132 (80%) and 33 (20%) were stratified as high risk. Fungal infections were documented in 18 (11%) patients out of which 7(39%) were probable infections, and only 11 (61%) were proven fungal infections. *Aspergillus* was the commonest organism in 5(28%) patients. Death was observed in 21 (13%) patients and causes were sepsis due to infections in 18(86%) out of which fungal infections were 11(61%), bacterial 4(22%), combine bacterial and fungal 3(17%). Remaining 3(14%) patients' death causes included, neutropenic colitis, presumed infection without any identifiable focus, and third patient died due to chemotherapy related toxicity.

Conclusion: Our study concludes that the fungal infection was the most common cause of mortality in induction in our patients. A prospective study in the form of clinical trial is needed to see if use of prophylactic antifungal can improve outcomes in our setting.

Key words: Acute Lymphoblastic Leukemia (ALL), hepatosplenomegaly, Invasive fungal infections (IFIs).

177-P

CHEMORADIATION FOR ANAL CANCER PATIENTS; LONG TERM RESULTS AT A TERTIARY CARE HOSPITAL

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SHAUKAT KHANUM MEMORIAL HOSPITAL AND CANCER RESEARCH CENTER

Abstract

Purpose: The aim of the study was to evaluate long term oncological outcomes after concurrent chemoradiation in anal cancer patients.

Materials & Methods: 42 anal cancer patients ,treated radically with concurrent chemoradiation or radiotherapy alone were retrospectively reviewed between May, 2006 to May ,2016. 81% of the patients were males and 19% were females. 1 patient had stage 1 ,10 patients had stage 2 and 29 patients had stage 3 cancer. 40 patients had concurrent Chemoradiotherapy and 2 patients were treated with radical radiotherapy alone. Concurrent chemotherapy included a two drug regimen ,intravenous Mitomycin 10mg/m² on Day-1 only ,and 5Flourouracil 1000mg/m² on Day 1 to 4 and D28-32. Radiotherapy was given as a phase treatment to a total dose of 50.4 Gy to 60 Gy.

Results: Median follow up time was 30 months. The 5 year overall survival (OS) and relapse free survival (RFS) were 28.6% and 21.4 % respectively.3 year colostomy free survival (CFS) was 47%.About 69% of patients had complete clinical response, whereas 31% of patients had persistent disease.5 year overall survival in complete responders was 41.4% (P-sig).Total 11 patients had recurrences; 5 had local ,4 patients had regional and 2 patients had distant recurrences.

Conclusion: We conclude that clinical complete response is a reliable predictor of survival after radical chemoradiation in anal cancer, meriting further investigation in randomized clinical trials .

178-P**CHEMICAL SYNTHESIS AND CHARACTERISATION OF HIGH ANTI CANCER ACTIVITY EXHIBITING ZINC OXIDE NANO PARTICLES AND THEIR THERAPEUTIC SCREENING AGAINST HUMAN SKIN CANCER CELL LINES****SUNDAS SHAH****Abstract**

ZnO nanoparticles belong to the metallic class of nanocarriers exhibiting high anticancerous properties. These particles have direct mode of action when it comes to skin cancer, breast cancer and laryngeal cancer. These cancers may be fatal if not treated early. Skin cancer is by far among most common human cancers, with 3 million people in the world diagnosed each year. This study works around 5-Fluorouracil (marketed as adrucil, used for the treatment of skin cancer) conjugated ZnO nanoparticles. The particles were PEGylated (PEG coated) for site specificity, sustained release and differentiating between normal and cancerous cell. These nanoparticles can enter inside the tumor cells and access the DNA and make defects in the genes by inducing Reactive Oxygen species. ROS can attack the pathways of mitochondria where ROS will induce BAX to migrate to the surface of mitochondria leading to the formation of apoptosome/caspases that play the most important role in activating apoptosis. The particles were synthesized chemically by wet precipitation method from sodium hydroxide and zinc nitrate tetra hydrate. The particles were characterized for morphology and size, by Scanning Electron Microscopy (SEM). SEM confirmed the particles size to be 46 nm with spherical structure. They were also investigated by UV, XRD, EDS and FTIR. These drug loaded and PEG coated particles were evaluated through MTT assay against Skin cancer cell lines and further analysed through fluorescent microscopy and anti oxidant assays including DPPH assay, Glutathione and SOD assay. The viability of the cancerous cells were reduced to 50% when they were treated with PEG-5FU-ZnO NPs. These results make it very obvious that these particles contribute efficiently to development of suitable anti cancer drug delivery.

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CLINICAL SIGNIFICANCE OF 18F-FDG AVID MEDIASTINAL ADENOPATHY IN GASTROESOPHAGEAL CANCERS IN A TB ENDEMIC AREA.**SAIMA RIAZ, AAMNA HASSAN****DEPARTMENT OF NUCLEAR MEDICINE, SHAUKAT KHANUM MEMORIAL HOSPITAL AND CANCER RESEARCH CENTER, LAHORE, PAKISTAN****Abstract**

Purpose: The aim of the study was to evaluate long term oncological outcomes after concurrent chemoradiation in anal cancer patients.

Materials & Methods: 42 anal cancer patients ,treated radically with concurrent chemoradiation or radiotherapy alone were retrospectively reviewed between May, 2006 to May ,2016. 81% of the patients were males and 19% were females. 1 patient had stage 1 ,10 patients had stage 2 and 29 patients had stage 3 cancer. 40 patients had concurrent Chemoradiotherapy and 2 patients were treated with radical radiotherapy alone. Concurrent chemotherapy included a two drug regimen ,intravenous Mitomycin 10mg/m² on Day-1 only ,and 5Flourouracil 1000mg/m² on Day 1 to 4 and D28-32. Radiotherapy was given as a phase treatment to a total dose of 50.4 Gy to 60 Gy.

Results: Median follow up time was 30 months. The 5 year overall survival (OS) and relapse free survival (RFS) were 28.6% and 21.4 % respectively.3 year colostomy free survival (CFS) was 47%.About 69% of patients had complete clinical response, whereas 31% of patients had persistent disease.5 year overall survival in complete responders was 41.4% (P-sig).Total 11 patients had recurrences; 5 had local ,4 patients had regional and 2 patients had distant recurrences.

Conclusion: We conclude that clinical complete response is a reliable predictor of survival after radical chemoradiation in anal cancer, meriting further investigation in randomized clinical trials